BORREGO SPRINGS ENVIRONMENTAL & COMMUNITY RESILIENCY WHITE PAPER

Draft 1 - February 12, 2025
Draft 2 - February 27, 2025
Final March 14, 2025
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EXECUTIVE SUMMARY

The White Paper is intended to support environmental and community resiliency throughout the community of Borrego Springs. It is a product of funding from Proposition 68, Sustainable Groundwater Management Act Implementation Grant provided by the State of California Department of Water Resources and the Borrego Water District. Intended to assist with the implementation requirements of the state's Groundwater Sustainability Plan, known locally as the 2020 Groundwater Master Plan (**Reference 1** – Under Separate Cover), this paper is structured to be a resource for members of the community, policy makers, and governing bodies to better understand specific qualities and characteristics of Borrego Springs.

This paper includes a review of key elements of Borrego Springs basin, its community fabric and natural resources. It also includes results from global scientific resources, local academic institutes and environmental professionals, and community surveys and engagement gathered from the pre-application through present, grant project period, 2019-2025. And finally, it is intended to be used as a supporting resource for informing future iterations of the County of San Diego's General Plan and the development of an update to the 2011 Borrego Springs Community Plan (**Ref. 2**).

In January 2020, Borrego Water District (BWD) and the County of San Diego, were the first in California to file a Groundwater Sustainability Plan (GSP) for their aquifer/basin in compliance with the State's 2014 Sustainable Groundwater Management Act (SGMA). The GSP was developed in response to the desert community's dependence on groundwater from a sole-source aquifer. For over 70 years the aquifer has been subject to over drafting from farming activities of approximately 15,000 acre-feet annually (**Ref. 3**).

Subsequently, a local Groundwater Master Plan (GMP) was developed to supersede the GSP, and in 2021, over 90% of Basin pumpers negotiated an adjudicated Settlement Agreement. The Borrego Springs Subbasin Watermaster (Watermaster) was formed thereafter to monitor and sustainably manage the Basin together with implementation and enforcement of the GMP.

Ultimately, this white paper outlines a sustainable and resilient planning framework for current and future development which factors in critical environmental, socioeconomic, and infrastructure community specific constraints and concerns. It spells out strengths, challenges, and opportunities to integrate the new GMP with a future Borrego Springs Community Plan (BSCP) update. And it comments on the state of the region's resiliency today in the face of increased climate challenges in the future.

Key Findings and Themes

1. **Water Sustainability and Climate Change:**

- Borrego Springs was first in the State to utilize and file a Groundwater Sustainability Plan per 2014 SGMA.
- Borrego Springs water source is dependent upon a single aquifer.
- The 90% pumpers with the negotiated Base Pumping Allocation (BPA) are required to reduce groundwater use by approximately 70% by 2040 to comply with SGMA/GMP regulations.
- Community customers of the Borrego Water District (BWD) who historically have used only about 10-11% of the annual share are not expected to decreased allocation or increased water cost as BWD has purchased additional water rights from adjudicated pumpers.

- Climate change is exacerbated air and water quality, water scarcity, and risk of biodiversity loss, that is a threat to human health and well-being due to increased stochastic weather events, such as extreme heat, droughts, floods, and winds.

2. **Environmental Challenges:**
- Declining water levels put basin ecosystems, including Mesquite Bosque and Ocotillo Forest, at risk.
- Habitat loss and declining water levels put local biodiversity and endangered species, such as Peninsular bighorn sheep, at risk.
- Increased dust storms, exacerbated by fallowed agricultural lands, pose air quality risks.

3. **Community Planning and Socioeconomic Factors:**
- Borrego Springs is predominately an aging community lacking diversity that is economically dependent on tourism and seasonal residents.
- Sustainability and water conservation are top priorities as identified by public engagement through surveys.
- Affordable housing and access to healthcare have been identified as major concerns.

4. **Infrastructure and Public Facilities:**
- Transportation considerations, such as commuting distances, local service accessibility, wayfinding, safety, and Vehicle Miles Traveled impacts must be improved.
- Energy reliability conditions and improvements, such as microgrids and battery storage, are essential due to unpredictable power shutoffs and the need to maintain connectivity for safety, communication, and air conditioning due to desert climate conditions.
- Flood risks and water pollution are significant risks due to alluvial fan flooding and climate change, requiring updated stormwater, water, and sewer/septic management measures.
- The community aims to retain and enhance dark sky conservation and quiet park initiatives.

5. **Proposed Solutions and Recommendations:**
- Develop and implement a locally integrated, watershed-scale, master or community plan that augments ongoing sustainable development planning efforts by incorporating new water conservation measures mandated by the 2020 GMP, local, climate adaptive, environmental protections, and resilient town planning elements.
- Support sustainable agriculture and recreation, and ecological restoration of fallowed lands.
- As the aquifer is being restored, provide interim support to native Groundwater Dependent Ecosystem.
- Continue to strengthen education, opportunities, governance, infrastructure, and community engagement for long-term resilience.
- Expand existing local renewable energy infrastructure to increase energy independence.

Summary

Borrego Springs is an actively engaged leader in community ecological awareness and conservation. The community have been working collectively to address critical challenges related to water scarcity, climate change, and infrastructure adequacy and resilience. With continued on-going strategic planning, sustainable development innovation, and community engagement, it will be a role model of success for other arid regions facing similar challenges. This white paper tiers off Borrego Spring's prior planning efforts to provide a roadmap for a resilient, integrated, science-driven, and community-supported outcomes that support its viability into the future.

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1. The White Paper

A. Problem Statement and Introduction of Solutions

Borrego Springs is in San Diego County's most arid climate and is served by a sole source aquifer. It is currently being restored after decades of over drafting. In January 2020, Borrego Water District (BWD) and County of San Diego, were the first in California to adopt a Groundwater Sustainability Plan (GSP) for their aquifer/Basin in compliance with the State's 2014 "Sustainable Groundwater Management Act (SGMA). Its Community Plan (BSCP) was adopted in 2011 and needs to be updated with to the new information generated by the state's Proposition 68 SGMA Implementation process. To continue to thrive into the next century, Borrego Springs leadership needs to steward its ecologically sustainable path forward and build towards an economically balanced and socially equitable future by merging its GSP policies into an updated BSCP **(Ref. 4 – FIGURE 1**).

B. What is the Scope of the Problem?

The problem of arid heat with its dependency on a sole source water supply is unique to Borrego within San Diego County. Borrego serves as microcosmic glimpse into the future climatic conditions in hot, arid climates. With temperature goals for the planet of 1.5 degrees Celsius or 3 degrees Fahrenheit now being regularly exceeded (**Ref. 5**), all Californians, and beyond, are now poised to face increasing stochastic weather extremes with global temperature rise. However, due to Borrego's innovate response to its water supply issues to further increase its long-term resiliency, these measures should serve as a hopeful model to sustain arid, desert communities throughout the southwest.

C. Why Does this Problem Require Attention?

After having an unstainable yield taken from its aquifer since around 1994, Borrego has completed a sustainable groundwater management plan **(Ref. 6 – FIGURE 2).** While residents ace risky environmental conditions and challenges, they now enjoy state and local support in the form of the GMP, SGMA grant money, and willing constituents working towards a resilient community. From this point forward, new issues the community will have to solve for are responses to the abandoned and fallowed agricultural fields and dying native habitats. Recently, mesquite bosque has been proven to still be reaching for and accessing the aquifer (**Ref. 7**). The Final 2020 GMP plan requires a sustainable yield of aquifer drawdown from the high starting use in 2020 of approximately 26,000-acre feet per year to approximately 6,000 to 8,000 AF/yr by 2040, which is a reduction of about 70%.

Note that only the 90% pumpers with the negotiated Base Pumping Allocation must reduce groundwater use by approximately 70% by 2040 to comply with SGMA/GMP regulations. Community customers of the Borrego Water District (BWD) who historically have used only about 10-11% of the annual share are not expected to require decreased allocation or significant water cost increase as BWD has purchased additional water rights from adjudicated pumpers (**Ref. 8**). The momentum of the grant to fulfill annual and 5-year reports will guide Borrego to successful water management outcomes.

D. Steps Towards a Sustainable Future

Borrego's historic agriculture production pumped approximately 15,000 acre-feet of groundwater from a sole-source aquifer for over 70 years (**Ref. 2**). In 2020, the GSP puts Borrego's aquifer/Basin acre-feet groundwater use in compliance with the State's 2014 SGMA. Throughout 2020 and 2021, over 90% of Basin pumpers negotiated a Settlement Agreement and an alternative to the GSP, known as the local GMP, that was approved by the state. In April 2021, the Borrego Springs Subbasin Watermaster (Watermaster) was established to monitor and sustainably manage the Basin and implement and enforce the GMP.

This paper provides an outline of the critical environmental, socioeconomic, and infrastructure community specific constraints and concerns. Its primary objective is to inform future policies and regulations that guide future development on the need for more sustainable and resilient outcomes. In this era of increased climate challenges, Proposition 68 and a SGMA Implementation Grant funded this paper to explores the challenges and opportunities that the GMP brings to future policy and regulatory updates. This information is particularly relevant to the forthcoming BSCP update, which was adopted in 2011.

E. A Resilient and Integrated Sustainable Land Use Framework in the County of San Diego

In 2011, the County of San Diego adopted its General Plan that had been last updated in 1978. The BSCP was accepted and adopted into the County's General Plan in 2011 (**Ref. 9 – FIGURE 3**)**.** The county's General Plan contains seven (7) state required elements and appendices, which include land use, mobility, conservation, and open space, safety, noise, and housing (updated every 5-years). Its environmental justice and climate vulnerability elements, and the Climate Action Plan were added after 2016 as required by more recent state mandates. The Mobility Element Network Appendix was added in 2018, Land Use Map Appendix added in 2020, and Housing Element Appendices was added in 2021.

In 2022, the County also began a "Sustainable Land Use Framework" (SLUF - **Ref. 10**). See the VTM related discussion under the "Socioeconomics Analysis and Solutions" subsection for further details on how the SLUF came to be a "holistic policy approach intended to balance community priorities, guide future policymaking, and meet the goals of the County's Board" of Supervisors (BOS). The County's BOS is governing body for the unincorporated area. In 2024, the County adopted their final Climate Action Plan (**Ref. 11**). SLUF is will structure or frame the county's sustainability planning for the next iteration of its General Plan, which is also constantly in progress of being updated every 10 to 20 years per state law.

The SLUF is intended to gather community input and develop a more adaptable, inclusive and "holistic approach to sustainable planning and development to ensure that ALL unincorporated communities (which includes Borrego Springs), regardless of their proximity to transit, services, and amenities can live, evolve, and thrive in an equitable and sustainable way." The SLUF "Framework," will then be integrated into the next General Plan update to address any sustainable gaps and to help the County's General Plan evolve with and incorporate "new State legislation and adjacent (community) planning efforts.

F. How Borrego's Sustainability Planning Will Facilitate and Inform the County's SLUF

As the County SLUF evolves through 2025, this white paper's planning and process provides an additional means for Borrego to participate and contribute to in the County's final SLUF policies. Community interests within the unincorporated County are represented by Community Planning Groups (CPG) and Community Sponsor Groups (CSG - **Ref. 12**). CPG members are elected while CSG members are appointed. The purpose of these groups is to advise County Planning & Development Services, Planning Commission, and Board of Supervisors on land use related issues. There are 26 CPG/CSGs representing a broad cross section of the community, of which the Borrego Springs Community Sponsor Group (BSCSG) is a CSG.

The 26 communities advocate for their own community plan and California Environmental Quality Act (CEQA) update and public review process. This effort has been undertaken in Borrego Springs by the BSCSG in the hopes it will help inform development of a resilient updated BSCP to address current and anticipated needs in the future. The information in the paper was generated by the outcomes of the Proposition 68 California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access for All Act of 2018 (**Ref. 13**) grant-funding process, as well as 2020 outline/ Scoping Proposal for an "Integrated Watershed-Scale Master Planning Process (**Ref.14**), and subsequent 2021 grant and grant agreement (**Ref. 15**). In addition, this process is informed by national and international best available science, best management practices, and sustainability guidelines and goals including the UN's 17 Sustainability goals adopted in 2016 (**Ref. 16 – FIGURE 4**) and utilized within SANDAG's regional planning framework (**Ref. 17**).

In the context of discussing conservation and restoration of biologic resources in Borrego, a new program known as "30x30" was adopted by the State in October 2020 (**Ref. 18**), the nation in 2021 (**Ref. 19**), and the international community30x30 is Target 3 of the Kunming-Montreal Global Biodiversity Framework (**Ref.20**). The program was hence adopted by over 190 countries by December 2022 to support species and ecosystem resilience in the face of climate change and increasing levels of global land modification. Although, the concept was initially discussed in various sectors as 50% for Nature. Nature needs ½, and Half Earth Day in 2019 and prior, the idea of '30x30' is to reach preservation of 30% of nature, land, and water in each adopter region by 2030 and perhaps reach for 50% by 2050. These percentages have been touted as ways to ensure the ecosystem services of nature continue to function to support development sectors humans depend on, such as agricultural output, fisheries, water recharge, and species diversity/biodiversity (**Ref. 21**).

G. Addressing Limited Water and Facing Climate Change

The heritage, identity, and economy of Borrego Springs is tied to its wide-open vistas, and fragile desert landscapes. For this reason, all planning for Health, Education, and Economic Development in this community must occur with an ecological lens. Recognizing that land use and land use change accounts for 23% of GHG emissions globally, and that biodiversity loss is accelerating at alarming rates, the important ecological characteristics of Borrego's connection to water, species, and soil and their interplay with land use patterns, including existing local, state, and federal guiding plans and policies, and weather conditions, including climate change, must be considered (**Ref. 22**).

Borrego Springs exists within the direct connection of the health of the community in balance with its natural resources. The water supply of Borrego Springs is its modifying factor. The treatment of water can create positive or negative effects on other natural resource provisioning, regulating, cultural, and supporting functions (**Ref 23 -** **FIGURE 5**).

The Borrego Springs subbasin aquifer provides high quality, potable water. The overdraft of the aquifer began with the rise of agriculture in the early to mid-20th century. With keen forethought and insight, Borrego Springs documented the issue and adopted a vision and commitment to replenish its aquifer within its. As stated, the BSCP has not been updated substantially, particularly since a sustainability oriented 2020 GMP was completed. In 2014 the BWD and County started the plan process because Borrego's water supply met criteria as a severely over-drafted basin and were later joined by the Watermaster (**Ref. 24 -** **FIGURE 6**).

A major indicator of climate change is stochastic weather. Examples are the annual threat of possible historic flooding events over a 100-year flood category (**Ref. 25**), an increase in prolonged periods of drought, low-risk fire threats from wildfire, and an increase in temperatures. Borrego is also subject to frequent power grid shutoffs to protect nearby and connected mountain communities during natural disasters (**Ref. 26 -** **FIGURE 7**).

In the past, conventional development pressure from housing and commercial development have been impeded by water insecurity. Today, and into the future, new housing goals and incentives are being passed annually by California state legislature bills due to statewide housing deficiencies and affordability crises (**Ref. 27**). And in response to lower carbon emissions to combat climate change, a new class of regional renewable energy projects are creating a new type of development pressure.

In the face of climate change, more sustainable living fosters a community's resiliency by conserving resources responsibly and having resources in reserve to respond to future unknown events. For this, and other reasons listed above, an integrated town planning and environmental-focused community plan, at the scale of Borrego's watershed, will produce a resiliency-based plan. And it is important to amplify Borregons voice to inform County and State governance decisions.

2. METHODOLOGY and RESEARCH

A. Grant Context

This work is funded by Proposition 68, SGMA Implementation Grant. It is in conformance with the grant agreement between the State of California Department of Water Resources (DWR) and BWD, per Grant Agreement Number 4600014652. Deliverables for this grant are listed as Components 1 – 8 (**Ref .28 -** **FIGURE 8**). Borrego Spring's Groundwater Subbasin Characterization, and its companion appendices and other deliverables, are identified in "Component 5 - Resiliency Strategy, Category (b): Environmental / Engineering/Design Task 2: Basin Characterization," which mandates Task 2: Basin Characterization (**Ref. 29 -** **FIGURE 9**) to compile and summarize research in collaboration with the region's experts, including but not limited to UC Irvine Anza-Borrego Desert Research Center researchers, Anza-Borrego Desert State Park environmental scientists, and BWD in natural resources/environmental characteristics, planning, and governance.

These documents informed the community visioning process and the development of community priorities for the basin under Task 5, which identified and prioritize basin issues and opportunities and included potential basin restoration or management projects. The process obtained feedback on this summary white paper from a minimum of five (5) water network partners and/or cooperators. The grant funded the work to perform a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of the natural resources within the basin.

The deliverables of this component include this white paper, a "factsheet summary of white paper and website/brochure FAQ," a standalone "Strengths Weaknesses Opportunities and Threats (SWOT) Analysis for Borrego's natural resources" and documentation of basin monitoring and evaluation roles, responsibilities, and decision-making protocols from authorities such as BWD, the GMP, technical consultants to parties in the basin, and other key federal, state and San Diego County entities under Component 5 Resiliency Strategy.

B. Research Limitations and Biases

All research including for this White Paper has limitations and biases. Foremost engagement bias occurs during public engagement with surveys and at events as not everyone will wish to engage in one form or another, or at all, therefore the data can be skewed to engagers in the community. Various sources, and general temporal and spatial (time and space) of the study also inherently influence data.

For instance, the timeframe in which data was gathered included time limitations imposed by the grant period limitations. Additionally, differences of opinion among various experts and providers of data can occur and may present as occasional minor differences between various sections of the paper (i.e., one source might report Borrego is 87 miles from San Diego and another reference says 90, or the median age may be reported as 53.8 in one section and 58 in another). Overall, the individual biases, strengths, and weaknesses each analyst brings to the team effort ultimately influences how data is presented.

Finally, the intended target audience, such as laypeople, academicians, executives, students of different ages, etc., and tone, which is conversational, scientific, persuasive/marketing, etc., are also biases in the final presentation. This paper attempts to focus on best available science that is peer reviewed or expert opinion/data, with facts that generally have consensus around them, and showing and explaining work for other information sources process. The paper presents this methodology in an understandable way is thus critical for helping audiences understand and assess inherent bias and limitations of research and data.

C. Research

This paper consolidates knowledge assembled from the existing BSCP, prior planning documents, and GSP work. Information was collected from an exhaustive literature search, especially publications produced after the existing BSCP, and an integration of the community, county, state, and federal level plans and policies. And it utilizes academic environmental and town planning expertise expressed during this grant process.

This paper references the other in-process components of the grant as part of the Groundwater Subbasin Characterization section. Component 5 task compiled and summarized our research in collaboration with the region's experts. In addition, Component 6 - Biological Restoration of Fallowed Lands, Component 7 - Monitoring, Reporting and Groundwater Management Plan

Update, and Component 8 - GDE Identification, Assessment, & Monitoring informed the paper's research, analysis, and recommendations.

Community Input came via the 2024 survey (**Appendix**), and engagement events such as the Town Halls, and Borrego "University" expert presentations on various media platforms (in-person and on-line) between 2019 to 2025. The "Draft Final Groundwater Management Plan for the Borrego Springs Groundwater Subbasin Plan (**Ref. 1**)," and the "Integrated Watershed-Scale Master Planning Process Scoping Proposal (**Ref. 14**)" were used extensively to inform the environmental and planning sections.

The BSCP is a major base source of information. Other important data sources include the research and information documents from the California DWR (**Ref. 13**), County of San Diego, and Borrego Springs specific data used to initiate the GSP (**Ref. 1**), the subsequent legal proceedings of the GMP. Additional documents perused include all relevant County documents including the 2011 General Plan, (**Ref. 9**) the 1988 regional Multiple Species Conservation Program (MSCP – **Ref. 30**), and the in-process and pending North County and East County MSCP subarea plans signed 2021 Planning Agreement (**Ref. 31**).

The County's development code and guideline documents for grading, and newer climate change and sustainability documents (**Ref. 10 and Ref. 11**) and efforts are explained in more detail below. Federal, state, regional, and local data was referenced from planning and resource agencies. Federal agencies include the United States Census (**Ref. 32**), United States Forest Services (Ref. 33), United States Geological Survey (**Ref. 34**), United States Fish and Wildlife Service (**Ref. 35**), and Federal Emergency Management Agency (**Ref. 36**).

State of California agencies and resources include Office of Land Use and Climate Innovation (LUCI - **Ref. 37**), California Environmental Quality Act, (**Ref. 38**), California State Parks (**Ref. 39**), California's 30x30 program (**Ref. 40**), California Department of Fish and Wildlife (**Ref. 41**). Locally, research included County of San Diego, San Diego Association of Governments (**Ref. 42**), as well as from academic institutions and a variety of professional environmental planning consultants including University California Irvine Land IQ (**Ref. 43**), Dudek (**Ref. 44**), WestYost (**Ref. 45**), and others. Finally, non-profits and local community committees and consultants, including the Borrego Valley Stewardship Council (BVSC - **Ref. 46**), Civic Well (**Ref. 47**), the implementing agency under the BVSC, and the BSCSG (**Ref. 48**) also informed this paper.

Many documents utilized in this paper are works in progress and meant to be 'living documents,' especially those related to climate change and biodiversity. In fact, the GMP itself is constantly evolving as the program requires both annual and 5-year reporting period documents so the state and locals can track, monitor, and inform and update the parameters of the management plan and programs. Additionally, the County's on-going climate planning includes recent adoption of the final CAP (**Ref. 11**), the in-process Regional Decarbonization Plan (RDP – **Ref. 49**), and in-process SLUF (**Ref. 10**).

To serve a variety of community users and planning officials, this White Paper, and the Basin FAQs and SWOT analysis are intentionally structured in a succinct, high-level format, with footnotes or references and hyperlinks provided for additional information. References and Figures provide additional resources and weblinks to supporting information. The appendices are complete documents for reference as well.

D. Demographic and Diversity, Equity, and Inclusion Data

Government census data, and other value adding government sources, such as SANDAG, and school districts that "crunch" data were perused for relevant demographic information. The state of California determined that Borrego Springs is a Severely Disadvantaged Community (SDAC) as defined in California Health and Safety Code, Section 116760.20 (**Ref. 50**). SDACs are Census geographies having less than 60% of the statewide annual median household income.

Anecdotally, official demographic data, such as the American Community Survey Data (**Ref. 51 – FIGURE 10**), may not be representative of local community perceptions or observations. Perceived inconsistency is understandable based on the seasonality of the area, as it is estimated that part-time residents, seasonal workers, "snowbirds," and weekenders inflate the population two-fold (**Ref. 14**). Additional reasons may also include that there is simply less meaningful "crunched" data for the small community of Borrego where numbers may not add up as "statistically significant" in government databases.

United State Census Bureau 2018 data (**Ref. 32**) collected for 2010, 2020, and 2015 from the American Community Survey 5-Year Estimates may be incomplete for reasons which may include the pandemic, and/or peoples fear of government motives. Thereby, attempts to accurately identify all members of Borrego's fabric to reach and serve the needs of all in the community, including underrepresented, underreported, or hidden populations in Borrego has been on-going issue. Solutions may include anecdotes from personal communications with trusted community representatives.

E. Public Input

To better understand the needs and preferences of the Borrego Springs Community, the BVSC, funded by the SGW Implementation Grant and DWR, conduced a comprehensive community survey (See Appendix - Community Survey 2024). This intent of the survey was to inform the development of a community resiliency strategy. The survey addressed various aspects of community life, including housing, infrastructure, public services, and economic development.

168 people responded to the 2024 survey. Due to a variety of engagement methods including in person gatherings, an on-line portal, and emailed surveys, the total number of engagements is unknown. The survey's response format was multiple choice, with priority selection questions with additional input boxes available. Engagement was open and included residents, property owners, and visitors.

The result of the survey reveals a mature, predominantly white residential community facing significant challenges with healthcare access, water sustainability, and affordable housing concerns. Borregons surveyed stated they benefit from strong community bonds and amenities of being surrounded by the protected natural landscapes of Anza-Borrego Desert State Park. The survey provided additional insights into community demographics, needs, and priorities.

F. Intended Use of This Paper

This paper is intended to be used as a planning aid to update the BSCP update, to interact the County's SLUF planning process, and then to inform a future County General Plan update. The General Plan Land Use Maps (**Ref. 52 – FIGURE 11**) should be utilized to determine the type, location and density of land use currently allowed. Additionally, county land use map. General Plan LU-A-6.6 map (**Ref .53 – FIGURE 12**) illustrates greater desert lands surrounding Borrego

Springs and should be updated for consistency with the adjacent land use and communities. This and other information provided on other current local, state, and federal programs should help Borregons identify where countywide policies and practices could be updated to further sustainable development and resiliency in the Community.

1) To Update, Implement, and Monitor the BSCP

It is the responsibility of the county to implement any current and subsequent Borrego Springs Community Plans. Additionally, it is hoped that the county considers in-progress efforts, such as this paper, to update or amend the BSCP, consider new elements for resilience, and/or to monitor progress towards Borrego's stated community vision, goals, and expressed policies. The existing Community Plan includes the community's key issues as well as goals and policies to reach them. Additionally, for each policy or set of policies, there are one or more implementation actions identified to carry it out.

The planning process base of this white paper tiers off the latest BSCP, which demonstrates the distinctly, progressive, and more sustainable development ethos of Borregons. This is new mindset is crucial in facing to proactively mitigate for and adapt to the volatile outcomes due to climate change. Subsequently, this white paper analyzed, updated, and added community data, best available science, and research information relevant to Borrego and desert communities to the provide a planning framework to assist with updating the BSCP.

The implementation program also identifies the County department or agency responsible for its implementation, where appropriate. Many of the adopted policies and implementation actions are aided by County ordinances and discretionary action requirements related to zoning, design guidelines, and development standards per County Zoning and Building Codes and development regulations. Implementation of Community Plans and related community documents should be monitored on a periodic basis by the County and the Borrego Springs Community Sponsor Group for progress towards its implementation.

For compliance with State law, Community Plans shall be reviewed no less than once annually so that its implementation status may be included in the County's Annual General Plan Report to the State. The annual review also provides the opportunity for Community Plan to be updated and amended, as appropriate. Or the BSCP may be augmented with ancillary information, such as contained in this paper, to reflect changes in the community's vision, conditions, or attitudes.

3. BACKGROUND and CONTEXT

A. Overview

This broadest section includes broad cultural, environmental, and planning setting sections. Those broad sections are in turn broken in to subsections topics such prehistoric, and historic information and Desert Lands, along with their natural hazards and risks; The current local, state, and federal planning setting that shapes the community; and its present socioeconomic standings are also discussed, along with existing public infrastructure and facilities which support the community.

This background/context section is intended to lead the reader to independently discover many of the strengths, weaknesses, opportunities, and threats in the community for themselves. Each subsection will have appropriate analysis and discussion of challenges and solutions. And at the end of two broader combined sections, Cultural, Environmental and Hazards and Planning Settings, a SWOT will be is provided.

B. Borrego Springs Indigenous Land Acknowledgement

The community of Borrego Springs recognizes that it sits on pre-historic and historically tribal lands of the Kumeyaay, Cahuilla, and Cupeño, and for millennia the indigenous people lived harmoniously with the land as its first stewards.

C. Public Involvement – A Tradition for Planning in Borrego

Public Involvement in Preparing the original BSCP were gathered during Community Plan "Community Meetings" held beginning with the BSCSG on January 2, 2007. Public forums were held on January 29, 2007; February 26, 2007; and March 26, 2007. There was a presentation to the Borrego Springs Real Estate Association on April 10, 2007, and a final presentation to the BSCSG on April 24, 2007. These meetings involved more than 100 representatives of groups and individual citizens.

D. Integrated Watershed-Scale Master Planning Process

This paper presents a framework for an "Integrated Watershed-Scale Master Planning Process" that celebrates and identify Borrego Springs past, current, and future potential "strengths and opportunities." These include the people's resiliency while living within their uniquely arid and fragile desert ecosystem. This approach will help avoid, minimize, curtail, and reform Borrego's "weaknesses and threats" such as those caused by current outdated or generalized land use practices and policies. "Strengths, Weaknesses, Opportunities, and Threats" SWOT analysis are provided for environmental and planning in the sections below.

E. Pre-Historic and Historical Setting

A million years ago, the Borrego Valley was part of a vast savanna/grassland covered with lakes and streams. The Park contains one of North America's richest concentrations of Pleistocene fossils, dating from 2.5 million to 10,000 years ago. Today in the Borrego badlands, ancient fossil remains of mammoths, mastodons, camels, horses, giant sloths, and saber tooth cats can be found.

Borrego's earliest human habitants (6,000 to 10,000 years ago) were likely ancient ancestors of the Cahuilla and Kumeyaay peoples, who became active in the area about 2,000 years ago. These semi-nomadic tribes traveled from the desert lowlands to the mountains, and thousands of recorded sites mark their occupation within the Anza-Borrego Desert State Park and the Borrego Valley. The community of Borrego Springs is named for the Borrego, which is Spanish for “sheep,” that acknowledges its natural inhabitants, the federally endangered species known as Peninsular bighorn sheep.

Native Americans are credited with being careful stewards of the land for time immemorial and specific tribes in Borrego Valley include The Kumeyaay utilized the southern part of the Anza Borrego State Park (ABSP) and large parts of the central section, and their territory extended from Laguna Salada in Mexico to the Imperial Valley. The Cahuilla Native American tribes traditionally occupied the northern part of the park, and they spoke a Shoshonean language. The Cupeño people also lived in the northwestern part of the park, including the middle fork of Borrego Palm Canyon. Their territory extended to Hot Springs Mountain and Warner Springs.

The Northern Diegueño lived in the southern part of the park, including Lake Henshaw, San Felipe Creek, and Blair Valley and spoke a Yuman language. Evidence of Native American presence can be found as Rock art/Pictographs in many places in the desert. Additionally, one can find morteros used to grind and prepare food, and Agave plants: An important food source for the native people (**Ref. 54**).

F. Early European and North American Exploration and Settlement 1750 – 1930

Explorers such as Juan Bautista de Anza forged overland routes through the Borrego Desert in the 1770s; primitive paths that would become major transportation corridors. The Juan Bautista de Anza Trail is designated a National Historic Trail, and five historical sites mark where the Anza expedition camped. As they journeyed through Kumeyaay and Cahuilla lands. The event may have been documented as pictographs that exist today.

The 1800s and the California Gold Rush brought a flourish of immigration, transportation, and communications development. The historic Butterfield Stage Route quickly followed. Today it is recognized at sites such as the Vallecito and Carrizo Stage Stations, about 40 – 50 miles south of Borrego Springs, where weary travelers and horses once stopped for rest and food.

Following the Civil War, the cattle industry was supported by abundant feed and easily accessible water. Homesteading started in the early 1900s, and some structures and home sites remain. The homesteaders lived a rugged life of farming and ranching, drilling their own wells or hauling water to do so.

The 1920 – 30’s era coincides with early records of “tourists” journeying from the Warner Springs area to admire the Valley’s great natural beauty, plant life, and scenic vistas. In 1928, the Ensign Ranch was producing the first irrigated cash crops, including alfalfa hay. Also in 1928, Borrego Springs’ first store and post office were established at the location known today as “Old Borego”.

Increasingly, visitors and residents realized the great beauty and scenic value of the area, and in 1932, the Anza-Borrego Desert State Park was formed to protect these unique desert lands.

In the mid-1930's Burnand, Jr. became a significant agricultural investor, and there were at least eight major ranches in production. Agriculture was the mainstay industry, sustained by the favorable climate and irrigation with easily accessible water. After World War II, Jeeps and other transportation improvements made desert exploration popular and brought the colorful spring wildflower blooms to wider public notice.

G. The Role of Agriculture (1940 to Present)

By the mid-1940's, the DiGiorgio Fruit Corporation, the largest grape grower in California's central valley, had developed a thriving business here. DiGiorgio saw profit in getting Borrego grapes to market a full month earlier than other growers. To protect the seedlings, DiGiorgio planted miles of the highly invasive tamarisk tree (**Ref. 55**) windbreaks.

By 1950, DiGiorgio had more than 1,000 acres under cultivation along north DiGiorgio Road. Much of the natural desert landscape was removed with heavy equipment to make parcels more suitable for farming. The payoff came in mid-June 1950, when Borrego grapes grossed over $750,000, with competition only from Coachella Valley. By 1957, DiGiorgio was cultivating grapes on over 2,500 acres, and there were at least 20 major ranches in business producing cash crops like grapes, flowers, alfalfa, and cotton. Agriculture was the community's main economic driver, providing jobs and stability.

DiGiorgio's enterprise alone took nearly twenty wells to irrigate and more than 600 seasonal workers to harvest, pack and ship. As a result of Caesar Chavez' United Farm Workers' efforts to unionize DiGiorgio employees in 1966, DiGiorgio turned off the water, abandoned farming and turned his attention to residential and commercial development.

With grapes gone, large-scale citrus farming took hold in the valley. For the past several decades, the few remaining citrus and ornamental plant farms and palm nurseries have employed a handful of local people to manage operations year-round. These growers import seasonal harvesting crews to pack and ship produce and decorative palms to national and international distributors.

Now farming in Borrego Valley is changing dramatically. The implementation of SMGA requires the sustainable use of groundwater. SGMA is discussed throughout this paper (i.e. Executive Summary, Problem Statement, Methodology and Environmental Setting, etc.), but essentially in Borrego, the law led to a negotiated, legally adjudicated, agreement between the greatest (non-de minimus) pumpers to reduce water use each year by a specified amount, until by 2040, when a required cutback approximately 63-70% must be achieved (**Ref. 56**).

In lieu of the water cutbacks, several farm owners have chosen to fallow their land and/or sell it, along with its water allocation, to other entities who desire the water for their own use. Anecdotally, local farmers have recently sold acres of citrus farmland to the Borrego Water District. Simultaneously, families who have farmed here for decades intend to remain and are currently experimenting with less water-intensive crops and other water-saving methods. The two examples are of today's integrated watershed-based planning approach in the basin.

It is recognized that stopping irrigation on those acres and exposing them to frequent winds can lead to airborne dust particles which can be harmful to human health. Fortunately, the same Proposition-68 funded SGMA Implementation Grant that supports this paper, is also funding a study of how fallowed land with high winds spread invasive plant species across the basin.

4. ENVIRONMENTAL SETTING

Borrego's greatest natural resource is its desert environment. The low-desert climate is characterized by mild winters and extreme summers. Rainfall averaging less than seven inches per year. And the warm, arid climate is a major influence on the area's history of success and continued future as a resilient community.

Visitors and residents alike appreciate the stark natural beauty of this vast desert landscape. This paper explores the potential impact of future man-made development on its natural setting. Its local characteristics—clean air, dark night skies, underground water supply, scenic mountain vistas, natural flora, and fauna—are vital to the social and economic vitality of future development.

A. Landscape and Habitats

Borrego Springs is surrounded by and biologically influenced by Anza-Borrego Desert State Park, the largest and most biodiverse Park in the United States second only to the Great Smokey Mountains. High elevation species such as white fir grow on several nearby mountaintops. Sonoran Desert stalwarts such as ocotillo, palo verde, fishhook cacti, and creosote are found in hotter, lower elevation areas.

A perennial stream, Coyote Creek, offers rare riparian habitat within this arid region. Thirty fan palm oases, ocotillo, piñon pine and juniper forests, and live oak woodlands. The eroded formations of the Borrego and Carrizo Badlands are found in the eastern portion of the park.

The 932 plant taxa found in the park include a number of species unusual in California, such as the elephant tree more typical of Baja California. Late winter and early spring bring spectacular wildflower blooms and throngs of visitors. 331 bird species such as greater roadrunners and golden eagles are on the park checklist. Reptiles and amphibians include over 60 different species such as chuckwallas, desert iguanas, and the red diamond rattlesnake. The 60 species of mammals range from kit foxes and mule deer to the majority of the endangered desert bighorn sheep remaining in California.

Due to aquifer overdraft and long-term drought, there has been very significant vegetation loss in Borrego Valley and the Park in general. A 2021 study by University of California at Irvine found that between 1984 and 2017, vegetation cover in desert ecosystems decreased overall by about 35 percent in the desert portions of the Anza-Borrego Desert State Park (**Ref. 59**). The already-designated Environmentally Constrained Borrego Sink area is losing large amounts of native mesquite woodlands, along with wildlife dependent on the habitat, and impacting the historic value of the area.

Along with the Borrego Sink, Borregons still have an opportunity to conserve other areas containing rare and endangered plant and animal species, archaeological sites, agricultural preserves, and other environmentally sensitive areas that could otherwise experience adverse impacts from development and/or climate change. In the absence of codified protection, natural habitats are regularly converted to manufactured landscapes using plant materials that are foreign to the desert ecosystem and require lots of water to maintain.

In the 2011 and prior BSCPs, the term Resource Conservation Area (RCA) was a designation used by the County to identify lands requiring special attention. Per the 2011 BSCP, one designated RCA was created for Mesquite Bosque and a cultural area in Borrego and four other elements were intended to be protected by RCAs including other areas of Mesquite Bosque, Ocotillo Forest, Wildflower Areas, and Prehistoric and Historic Cultural Areas. The RCA areas preserve significant natural resources in a manner best satisfying public and private objectives, in comparison to the 2011 County Land Use Plan and the EC-MSCP Focused Conservation Areas from the 2021Planning Agreement (**Ref. 60 - FIGURE 14**).

To further clarify RCA's, according to the Valley Center Community Plan were adopted in 1979 and amended through 2014. The County intended that RCA protection (**Ref. 61 - FIGURE 15**) be accomplished via several actions, depending on specific situations, including public acquisition, establishment of open space easements, application of special land use controls such as large lot zoning, scenic or natural resource preservation overlay zones or the incorporation of design considerations into subdivision maps or special use permits (**Ref. 62**).

Legal status, ownership, management, and other parameters of the RCA areas should be clarified in future iterations of the BSCP Community Plan and County General Plan/related policy and guideline documents (**Ref. 63**) County Biological Mitigation Ordinance (BMO - 2010), 1998 Regional MSCP (**Ref 64**), and 2021 East County Subarea MSCP (**Ref 65**).

Borrego Springs is located in a desert valley in the rain shadow of the Peninsular Mountain Ranges. The community is surrounded by the 600,000+ acres of Anza-Borrego Desert State Park. The diverse terrain supports a wide variety of native plant and animal species on surrounding lands. Many species of plants and animals are listed as State and Federal Endangered Species. Open space and unimpeded movement corridors are essential to the long-term health of many species of wildlife.

One of the native animals of note is the Peninsular bighorn sheep, which inhabits the steep slopes, deep canyons and the alluvial fans of Borrego Valley and the nearby state park. Bighorn sheep attract wildlife enthusiasts in large numbers to view these rare mammals in areas such as Borrego Palm Canyon, Coyote Canyon, Montezuma Grade and Yaqui Pass. They are observed crossing the Valley in places such as Indian Head Ranch near Henderson Canyon, the Vern Whitaker Horse Camp near the mouth of Coyote Canyon, and have even been seen crossing Di Giorgio Road near the Santiago Estates Mobile Home Park. Large numbers of Bighorn Sheep rely on the steep slopes of Coyote Mountain, Indian Head Peak, and Dry Canyon to safeguard their lambs during early spring and frequent the deep canyons west of the Borrego Valley for reliable water sources in summer.

Residents of Borrego Springs enjoy the proximity of wildlife near their homes and throughout the Valley as they travel to the town center to conduct business. Many residents maintain feeding stations for birds and are protective of their local wildlife. Antelope ground squirrels, quail, doves, roadrunners, and cactus wrens are well known to most Borrego Springs residents. The howl of coyotes is a common accompaniment to the dark skies of the desert. Open spaces between homes and businesses, preservation of intact native plant communities, and natural drainage patterns are all vital to the health of native animals and plants.

The current County General Plan, and County Ordinances & Regulations, however, allow for grading by right for many land use designations and have not been tailored to the fragile desert ecosystems of Borrego Springs. Even minor grading of desert lands can lead to rapid wind and

water erosion, unsightly scars, and a reduction of native plants and natural habitats. Native plants are essential to the retention of desert soils, wildlife corridors, and natural wind breaks.

The BSCP addressed many related grading and land clearing concepts and solutions to address them which are equally important today. The next BSCP iteration should comprehensively look at each of these vision, goals, policies, and implementation recommendations and update progress and information for the conservation of natural lands and species in the community. In the interim, fortunately, these concepts are being addressed through the GMP and SGMA Grant program, namely, with Component 6 “Restoration of Fallowed Lands” discussed below, in detail, under Soil and Air.

B. Desert Lands

The dominant influence on the community character is the desert lands. These lands create a sense of open space and unique community character through long sightlines, sweeping vistas, unique geography and unique flora and fauna. Desert wildlife is commonly observed throughout the Borrego Valley as they travel through the yards and roadways of the community. Borrego is on the migration path for Swainson’s hawks, turkey vultures and others (**Ref. 66**).

Coveys of quail, flocks of white-winged doves, roadrunners, Cooper’s hawks, jackrabbits, coyotes, bobcats and a variety of amphibians and reptiles are frequent visitors in the residential areas of the town. Even bighorn sheep and mountain lions find their way through the fringes of its valley, crossing from one mountain range to another, dependent upon open spaces and movement corridors.

The entire area of Borrego Springs is composed of a desert habitat native to the Colorado Desert, the northernmost subregion of the larger Sonoran Desert (**Ref. 67 - FIGURE 16**). This desert native habitat, flora, fauna and associated desert soils and drainages, has been disturbed by the process of urbanization by residential and commercial developments, roads, resorts, extractive uses and agriculture. Unlike ecosystems in other areas of the County, desert native habitat does not “bounce” back after development occurs.

Borrego’s privately-owned land falls into three categories: 1) Undeveloped and undisturbed desert native habitat with no recent past or current uses; 2) developed with current, active uses and all- or partly disturbed desert native habitat; and 3) previously developed with now-abandoned uses and all or partly disturbed desert native habitat. There is a sizable amount of acreage in the latter category, which detracts from community appeal and attractiveness.

C. Mesquite Bosque (Forest)

On the eastern margin of Borrego Valley, in the low-lying area known as “Borrego Sink,” large concentrations of the native Honey Mesquite (*Prosopis glandulosa*) are found. The mesquite forest, known by its Spanish name, Mesquite Bosque is a valuable native plant community that attracts large numbers of resident and migratory bird species. The mesquite provides large quantities of food sources to migratory birds as well as those species that stay through the nesting season. The mesquite flowers, and the insects they attract, are extremely important to scores of bird species, including the endangered Least Bell’s Vireo.

An important foundation plant in the lower elevations of the Borrego Valley, the Mesquite is a deep-rooted, woody legume that produces and recycles large quantities of nitrogen, a component rare in desert soils, and one upon which desert grasses and other native plants

depend. Nutrient enrichment of soil under a woody legume canopy can result in production values twice those measured between canopy spaces. The deep mesquite roots and the grasses that thrive underneath in the enriched soil serve to stabilize the surrounding sandy soil allowing other native shrubs to take hold, which then further stabilize and fertilize the soil with organic matter in the form of leaf and seed litter. Soil in these mesquite forest ecosystems tends to be more stable in wind and rainstorms, resulting in less runoff and wind-blown sand.

Culturally significant, lithic (stone) artifacts discovered in and around the Mesquite Bosque and surrounding low area known as the Borrego Sink indicate considerable use by Native Americans who harvested the mesquite bean pods and ground them into meal or flour, an integral part of their diet. The mesquite forest also provided wood, shade, and shelter for early desert people. In addition, native tools and weapons were fashioned from the heavy, dense wood of this native tree (**Ref. 68**).

The mesquite bosque plant community has been classified by the County of San Diego as an area of special concern which requires preservation. The Mesquite Bosque of Borrego Valley is the largest such plant community left in San Diego County and the only habitat in Borrego with a designed “Resource Conservation.”

Mesquite trees are documented as having the deepest root systems of any plant in the world. Despite the depth to which the roots can grow to reach water, a large number of the local mesquite can be observed as having died, clearly attributable to the declining water table (**Ref. 69 - FIGURE 18**).

D. Ocotillo Forest

The ocotillo plant (*Fouquieria splendens*), a tall, woody shrub species, is commonly thought of as the signature plant of the Colorado Desert. Ocotillos are thought by botanists to live as long as 200 years; they are slow to reach maturity, and once removed from a parcel of land, will not naturally regenerate for many decades or centuries. High densities of ocotillos are found in the northern and southern areas of Borrego Valley.

Thousands of acres of ocotillos have been removed for agricultural purposes in northern Borrego Valley, and large parcels of ocotillo forest are currently threatened by proposed development in the southern and southwestern portions of the Valley. Ocotillo is used for forage by bighorn sheep, mule deer and for food and nesting by many species of birds, including hummingbirds and orioles. Insects, an important part of the desert food-chain, also gain nutrients and water from the flower buds of the ocotillo.

The ocotillo forests are a key part of the natural desert surroundings in Borrego Springs, and a concerted effort needs to be implemented to protect this natural resource through acquisition by public/private land trusts and specific protection from destruction or disturbance due to development. Once removed, the ocotillo forests essentially can never be replaced. The ocotillo forests have taken many centuries to develop and cannot be easily restored (if at all) once destroyed.

E. Wildflower Fields

The most popular attraction to Borrego Springs for visitors from all over the United States and Europe are fields of native wildflowers, which in good rainfall years can literally cover the Borrego Valley in color. Several hundred thousand additional visitors will travel to Borrego

Springs and the nearby Anza-Borrego Desert State Park during a good flower season. The desert area needs to receive plentiful rainfall in mid-to-late winter in order for the seeds of annual wildflowers to respond in vast fields of splendid colors. This phenomenon may present itself only once every five to eight years and will last from late February to early April. The massive crowds of flower seekers cannot be over emphasized in their importance to the local economy, supporting business and local organizations of all types, including motels, hotels, inns, restaurants, markets, gas stations, gift shops and other retail and art galleries.

Wildflowers are found on all the lower mountain slopes surrounding Borrego Valley, in the State Park, but many of the best annual wildflower fields are found within the Community Planning Area on the floor of Borrego Valley. It is imperative the best of the spring flower fields are preserved, not only for the sake of this wonderful natural resource, but also for the sake of the future of businesses in Borrego Springs. Good flower seasons save many local small businesses, as they prepare for the five summer months of extreme heat when tourism slows considerably.

The most notable flower fields are found along Henderson Canyon Road, Bighorn Road, DiGiorgio Road, Borrego Valley Road, east Palm Canyon Drive, and Pegleg Road. Anza-Borrego Desert State Park and the Anza-Borrego Foundation and Institute have successfully purchased several hundred acres of prime flower fields in the northern Borrego Valley, and they continue to pursue new acquisitions to save the best wildflower areas.

The best areas for the annual flower bloom present a wide array of native annual plant species, including dune primrose, desert sunflower, sand verbena, popcorn flower, fiddleneck, desert lupine and the desert lily. Shrub and cacti species of note during the spring flower show include brittlebush, chuparosa, ocotillo, numerous cactus species, desert indigo and desert senna.

Preservation of the prime flowering areas of the Borrego Valley is key to the local business community and the health of the tourist industry in both Borrego Springs and the Anza-Borrego Desert State Park.

F. Dark Skies

The dark night sky over Borrego Springs and the surrounding desert area is so unique to San Diego that a 2003 USA Today article rated the Anza-Borrego Desert one of the top ten stargazing locations in the nation. Residents and visitors to this area are privileged to view the Milky Way in the dark night sky. Due to diligent monitoring of public and private exterior lighting, Borrego has maintained its dark sky environment.

Light pollution from local and encroaching growth is threatening dark sky, even though County lighting ordinances now call for outdoor lighting that does not point upward. Consistent lighting code enforcement—especially critical where proximity to Palomar and Mt. Laguna Observatories makes dark skies essential for scientific operations—must be achieved and exceeded.

In July 2009, Borrego Springs became California's first International Dark Sky Community. This designation was awarded by the International Dark-Sky Association (I.D.A.). Borrego Springs became the second, worldwide "International Dark Sky Community" and the first in California. Throngs of visitors venture to Borrego Springs and the nearby Anza-Borrego Desert State Park from all over the world to experience the natural desert landscape and the astounding clarity of the desert's night sky.

This designation serves to promote the community as a preferred destination for star-seeking visitors. Anza-Borrego Desert State Park will also pursue an International Dark-Sky Park designation. The area is highly susceptible to light trespass and degradation of its unusually dark night skies and dark night environment, both of which are unique and important elements of community character.

G. Quiet Conservation Area

Along with the Park's designation as a Dark Sky International Park; ABF, the Park, and the Community of Borrego Springs are committed to preserving the land, its flora and fauna, and the sounds that accompany a natural landscape. To achieve this, ABF and the Park has communicated the importance of quiet with the citizens of Borrego Springs and its visitors, namely by including noise in our 'Leave No Trace' principles when enjoying the Park and the Community's natural lands.

Understanding noise in a region, one gains a sense of the health of its ecosystems. By visiting wildlife habitats in the Community mindfully and quietly, one can help preserve their integrity. In March of 2022, Matt Mikkelsen, the Executive Director of Wilderness Quiet Parks, and his team came to Anza Borrego Desert State Park (ABDSP) to record and listen in the park. They set up their equipment ready to record before the sunrise and dawn chorus. Ultimately, they wished to determine whether it qualified under the Quiet Parks International Assessment Criteria for being a Wilderness Quiet Park. They worked over four days in four different locations of the park and returned to gather additional information the following year.

While it was the hoped the Park would be named a Wilderness Quiet Park, there are several sources of human-generated noise that disqualify it from the current assessment criteria. However the crew wished to continue working with the Park and ABF to find other ways of recognizing, protecting, and uplifting the beautiful soundscapes here. The solution was to name ABDSP a 'Quiet Conservation Area,' a first for public lands in the nation. Quiet can be most consistently found in the State Wilderness Areas within Borrego basin (**Ref. 70 - Figure 19**).

H. GROUNDWATER, SOILS, AND AIR

1) Groundwater

Borrego's groundwater is effectively drawn from a sole source of water supply. Since 1945, when large scale pumping began in the Borrego Springs area following World War II, the cumulative volume loss within the Subbasin, which accounts for both annual inflows and outflows, has been approximately 520,000 acre-feet (AF), equivalent to about one-third of the groundwater volume originally present (**Ref. 71**). By the mid-2000s, agriculture, golf course recreation uses, municipal uses, and the Anza-Borrego Desert State Park habitually used about four times more water than is available through natural recharge.

Anecdotally, it is said that fifty years ago the water level was about 40 feet below the ground and easy to pump out. Today, wells extend 300 feet and beyond to extract sufficient water to feed agriculture and ornamental landscape for export. Future costs of water and uncertainty of supply have made planning difficult in Borrego and have acted as a deterrent to growth. As a result, the demographics of those willing to invest in the community—both businesses

and residential housing, has been impacted. Alternatives to augment the sole source aquifer, such as piping Colorado River water to the area, were explored and rejected.

Explored circa 2010 and again in 2020, a proposal to have the San Diego County Water Authority **(**SDCWA) construct a Regional Conveyance System pipeline (RCS) that would have piped 20,000 AF per year from the Colorado River using a 47-mile-long tunnel from Escondido to Borrego Springs was explored in 2010 and again in 2020 (**Ref 72**). Both times, however, the project was deemed infeasible due to significant financial, environmental, socio-cultural, and temporal costs including:

- $10-$30 million for water rights
- $5-10 million to SDCWA for new pipeline, pumping station, and 230 kV powerline transecting ABSP
- $5-10 million for BWD to clean inferior Colorado River water quality
- An extended impact/construction timeline to 2047, or 7 years after the BWD Plan will have reached its 2040 sustainable water consumption goal per SGMA statute.
- Uncertainty of supply as the Colorado River is already over-allocated and due to unknown effects of climate change.

In 2009, the U.S. Geological Survey began a cooperative study of the Borrego Valley with the BWD in 2009. The purpose of the study was to develop a greater understanding of the hydrogeology of the Borrego Valley Groundwater Basin and provide tools to help evaluate the potential hydrologic effects of future development (**Ref .73 - FIGURE 20**). It is estimated that commercial and domestic uses consume 10 percent of the annual total and golf courses consume up to 20 percent (**Ref. 74 - FIGURE 21**).

By 2014 however, the SGMA was adopted with the required GSP for all "high" or "medium" priority basins to achieve sustainable groundwater management by 2040 or 2042. By 2015, the BWD received preliminary results of its aquifer status by USGS. It estimated that the underlying aquifer had sufficient water in storage to serve the community for the next 50 to 100 years (**Ref. 75 - FIGURE 22**).

The number, however, was preliminary and arrived at without any well monitoring to fine-tune and calibrate the model. Ultimately, based on USGS data, the CA DWR determined Borrego's water supply met criteria as a critically over drafted basin. Under SGMA, due to the aquifers severely overdrafted status, Borrego was required by the State to embark on its GSP to address the situation **(Ref. 76 - FIGURE 23**).

2) SGMA and Adjudication of Water Rights (2021)

Following submittal of the first GSP in the State by the BWD in January 2020; over 90% of Basin pumpers began discussions and ultimately negotiated an Agreement to implement an alternative to the GSP required by SGMA, known as the GMP. The Agreement was approved by the Orange County CA Superior Court in April 2021 resulting in a formal adjudication, which in other locations has taken decades and millions of dollars to accomplish (**Ref. 77 - FIGURE 24**).

Included in the Adjudication is the mandate to create the Borrego Springs Subbasin Watermaster. The Watermaster, is comprised of a Board of Directors representing a cross section of stake holders; and professional legal/technical staff capable of managing the

Basin, implementing the GMP, and complying with SGMA. The law under SGMA essentially led to a negotiated agreement between pumpers to reduce water use each year by a specified amount, until by 2040, it will be cut back by approximately 64% from present day use. Since the Watermaster's inception in 2021, all pumpers required to install a meter have done so. Basin pumping is down by approximately 50%, and a Basin-wide water monitoring network has been developed (**Ref 78**).

3) Effect of SGMA and Watermaster

Large-scale water use is now measured and constrained. Resolution of the aquifer overdraft is in-process. The community is building a more sustainable and resilient future.

4) Soil and Air

The soils, mostly sands and gravels of varying gradations, derive from alluvial materials deposited by seasonal floods from surrounding mountain regions, with little organic material. However, in some areas, soils are enriched by nutrients like nitrogen, a natural benefit for agriculture. Residual fertilizers remain on many fallowed farmlands and may leach into soils and groundwater supply and become airborne in dust. Existing high septic tank usage (instead of wastewater treatment in the Community) has the potential to degrade soils and water quality due to leaching. Currently there is no use of treated effluent (wastewater recycling) to irrigate golf courses and other high water use areas. Degradation of air quality in the community is due to large-scale clearing of soil crusts and native vegetation and other disturbances (such as grading natural landscapes into flat terrain, compressing soils with heavy equipment), and removing topsoil and other biotic features, such as burrowing animals.

Cryptogamic or cryptobiotic are both terms which refer to biological soil crusts which are made up of tiny organisms, including cyanobacteria, algae, lichens, mosses, microfungi, and other bacteria that live in the top layer of soil. The crusts are formed by interwoven filaments of cyanobacteria and microfungi and act as important soil stabilizers because they thwart erosion. They are a critical, but often overlooked component of arid, and semi-arid ecosystems in Borrego and throughout San Diego County. They not only provide nutrients to plants (including nitrogen and phosphorus); but accelerate weathering of rocks with their filaments, thus speeding up formation of soil.

In addition to San Diego County, they are found in all dryland regions of the world, (including polar regions), covering most soil spaces not occupied by trees, grasses, or shrubs. Without them, the interstitial soil space is left bare , open to topsoil loss, and proliferation of weedy species. The crusts are similar to ocotillo forests and other sensitive habitat in that they do not readily regenerate. Contributing factors to their destruction include permitted or unpermited grading for a variety of reasons (including agriculture), and authorized or unauthorized foot and vehicle use and misuse (extending trail margins or trailblazing). The result of their loss is increasingly nutrient poor soil; and decreasing air and water quality, from dust storms and migration of chemical laden sediments. In Borrego Springs, the greatest impact comes from development in the east and southeast of the community, and adjacent off-road vehicle use in Ocotillo Wells.

Due to the evolving water situation over the last decade, increasing areas of land have been fallowed, abandoned, or sold. Regardless of formal status, it is evident that areas of disturbed land have proliferated in Borrego Springs, which brings us to Component 6 of the SGMA Grant (**Ref. 79 - FIGURE 25**).

The 2020 GMP recognized that fallowing of agricultural lands would be key to achieving the aquifers sustainability goal, but also recognized that potential adverse environmental effects of fallowing could occur. Such effects include airborne emissions through wind-blown dust, the introduction or spreading of invasive plant species, and changes to the landscape that could adversely affect visual quality. Standard farmland fallowing practices identified in the GMP and used statewide (e.g., mulching orchard trees on site), provide temporary dust mitigation, but do not lead to long term recovery of the fragile, native, and arid plant communities that are unique to the Sonoran Desert ecosystem, and protected on adjacent Anza-Borrego Desert State Park lands (**Ref. 80 - FIGURE 26**).

Component 6 was therefore created to develop guidance on techniques to mitigate the potential adverse effects of fallowing of lands that are expected to occur within the Basin. This component is tasked with analyzing existing data and information, conducting field reconnaissance, and assessing biological restoration techniques on existing fallowed lands within the Basin. A final technical report will describe and document their results, conclusions, and recommendations; and identify biological restoration strategies that are expected to be most effective for Basin; with a prioritization of land parcels for biological restoration.

To date Land IQ and UCI Center for Environmental Biology (**Ref. 81**) have published a Literature Review for Rehabilitation of Fallowed Farmlands in Borrego Valley, California (Final March 31, 2023). Component 6 goals include review of, and experiments with, multiple methods of retaining soil on fallowed fields; reporting back on best methods, and practices; and ultimately to educate, encourage, and amplify rehabilitation, restoration, and conservation to return more native habitat to Borrego and increase its ecological resilience (**Ref. 82 - FIGURE 27**).

I. NATURAL HAZARDS and CLIMATE CHANGE RISKS

Borrego Springs is potentially subject to several natural disasters including earthquakes, flooding, fires, and other major safety concerns. The agencies responsible for coordinating response to these types of events are the San Diego County Office of Emergency Services along with the CA Office of Emergency Services (OES - **Ref. 83**). While SD OES orchestrates the local County response to disasters; CA OES is responsible for alerting and notifying appropriate agencies for mobilization when disaster strikes, and ensuring resources are available and mobilized. CA OES also develops plans and procedures for response to, and recovery from disasters; and develops and distributes preparedness information and materials to the public.

OES staffs the Operational Area Emergency Operations Center, a central facility which provides regional coordinated emergency response, and also acts as staff to the Unified Disaster Council (UDC), a joint powers agreement between all incorporated cities and the County of San Diego. The UDC provides for coordination of plans and programs countywide to ensure protection of life and property.

Locally, governmental institutions playing the largest role in safety response are the Borrego Springs Fire Protection District (BSFD), the San Diego County Sheriff's Department, California Highway Patrol, and the law enforcement arm of the Anza Borrego Desert State Park. BSFD, as of July 2023, is part of the CalFire managed San Diego County Fire Protection District (SCDFPD - **Ref. 84**).

1) Seismic and Geologic Risks

The Coyote Creek fault is an extension of the San Jacinto Fault extending from the northwest trending to the southeast extending into the Sea of Cortez. The Coyote Creek fault is a strike-slip fault with two locations in the Borrego CPA. The fault is located along the base of Coyote Mountain in Coyote Creek and in the Clarks Lake basin. It last faulted in 1968 in the general location west of the Badlands. The San Jacinto Fault is active with a magnitude potential of 6.5 to 7.5 (**Ref. 85 - FIGURE 28**).

2) Flooding Risks

With few exceptions, the entire Borrego Valley is subject to flooding from stormwater flowing from the mountain regions in the west down alluvial fans and across the community draining easterly to the Borrego Sink. Per 2021 updates to the County General Plan (pg 264), most community planning areas have between 100 to 4,700 acres of land identified as a floodplain but "Borrego Springs (within the Desert Subregion), has nearly 30,350 acres of land in its alluvial floodplain. Flash flooding that occurs in deserts can attributed to such high alluvial acreage (**Ref. 86**).

The County of San Diego Flood Hazard Map for Borrego Valley (1993) delineates boundaries of known special flood hazard areas along alluvial fans and lines of equal probability (showing flood depths and velocities). Alluvial fans are generally a desert phenomenon where streams emerge from canyons and deposit sand and rock in a cone-shaped formation fanning out from the canyon mouth. The potential for high-velocity flow and heavy sediment load coupled with the complex nature of alluvial fan flooding means that virtually all parts of the fan can be threatened by catastrophic flooding. The Borrego Valley Flood Management Report (**Ref. 87**) provides methods for reducing risk to structures built on the alluvial fan (**Ref. 88 - FIGURE 29**).

Runoff from storms in this area has the potential to convey large amounts of debris from the upper watershed to the lower areas of the alluvial fans in and near the Borrego area. Debris flows of this nature present one of the most hazardous and unpredictable types of flooding. The basis for flood control is the standard 100-year event as mapped on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), which is regulated in the community via the County Flood Damage Prevention Ordinance and the National Flood Insurance Program (NFIP) Regulations (**Ref. 89 - FIGURE 30**).

There are several properties in Borrego that are subject to flooding, mapped as "repetitive loss properties" in the County Floodplain Management Plan (FMP), and many of these properties have filed flood loss claims in the past. Any future develop should consider flood risk and the appropriate land uses for flood prone areas, including allowing areas in a flood zone to be utilized for agriculture, open space, or habitat restoration. County ordinances and the NFIP Regulations have specific requirements and restrictions that apply to development within mapped areas of alluvial fans. Due to the potential hazards, and other restrictions for development, proposed development in this area requires safety related drainage measures above and beyond what would normally be anticipated within other areas of the County.

Acceptable safety-related drainage measures required for development in the Borrego Springs area impose substantial cost and site planning burdens on individual property owners and create substantial planning, policy, and design considerations for structures in concentration, such as identified in the county's General Plan as Village Core area, with resulting negative impacts on area commercial revitalization. The County recognizes this

impact to the community and is active in national dialogues to explore alternative approaches that are protective of human life and property but less burdensome. However, due to the risk associated with alluvial fan flooding, including debris flows, as well as their unpredictability, relaxation of standards is not anticipated and alternatives such as master drainage improvements are currently deemed to be cost prohibitive for communities like Borrego Springs.

3) Wildland fire/Urban fire Risks/Climate Change/ and Air Quality Risks

The Borrego Springs CPA is not located in the Wildland Fire Zone as defined by California Fire (CFD) whereas neighboring communities such as Julian are so defined. The impact from actual fire on the desert communities therefore is minimal since the sparse plant communities do not contribute to wildfires with the occasional exception of grass fires in the agricultural areas. Borrego is impacted to the extent that firefighting personnel and equipment can be called to adjacent communities to assist in wildfire suppression, and importantly when fire in other communities require shutting down of the power grid.

The California Public Utilities Commission's (CPUC) updated "Public Safety Power Shutoff" portal which depicts that SDG&E Customers, including Borrego, likely experienced one, or many more of the 51,992 Public Safety Power Shutoffs between 2018-2024. Often times during periods of high winds associated with Santa Ana's, Borrego's entire grid is shut down to ensure that fire prone communities connected only to Borrego by the powerlines, remain safe from downed or damaged transmissions and/or arcs and sparks. In other words, Borrego suffers when locally dispersed (i.e., Borrego's microgrid), or fully independent energy sources (such as roof top solar, or generators) are not available (**Ref. 90 - FIGURE 31**).

A Santa Ana event in December 2024 alone, led to the loss of over 16,000 homes and structures in the Los Angeles area. Power shut offs in San Diego, including in Borrego Springs, for 51,022 customers over a span of 2 or 3 days (**Ref. 91**). But Borrego is one of the few resilient communities in San Diego County that has been planning sustainably and does have an existing microgrid that was installed in 2013 (**Ref. 92 - FIGURE 32**).

Additionally in CA, Valley Fever cases tripled from 2014–2018, and from 2018– 2022, between 7,000 and 9,000 cases were reported each year. The Valley Fever fungus can infect people who work or dig outdoors in certain areas in California, including wildland firefighters digging and moving soil to control fires and can cause death (**Ref. 93**).

Since 2015, in a joint venture between UCI, BDW, and the Borrego Valley Endowment Fund, Borrego Valley has developed one of the most sophisticated air quality monitoring systems of any small community in California. The monitoring system is composed of five stationary nephelometers located strategically throughout the region – Clark Dry Lake, Wilcox Well, the UCI Research Center, the Borrego Springs Elementary School, and Viking Ranch – and one mobile nephelometer used to intercalibrate the stationary monitoring devices with an official EPA-approved monitoring device in the Imperial Valley. The Borrego Air Quality monitoring system provides for constant monitoring of dust, or "particulate matter" sizes PM 2.5 and PM 10, which are the sizes of particulate matter regulated by EPA clean air standards. The process of intercalibration of the maturing Borrego Air Quality monitoring system with EPA-approved monitoring devices will allow for closer coordination with the San Diego Air Pollution Control District for monitoring of air quality in Borrego and enforcement of federal clean air standards (**Ref. 94**).

One USFWS restoration project, which began in the area in 2015 at Salton Sea, would have air quality benefits for Borrego. The Red Hill Bay project, aimed to restore 420 acres of important saline shallow-water habitat for migratory waterbirds, and to cover the newly exposed playa with saline water in order to decrease fugitive dust released during wind events The site however, has been discovered to have underlying potential for a rare earth mineral (lithium) and logistics to separate the surface restoration and the underlying mineral rights are believed to be in process (**Ref 95**).

J. ENVIRONMENTAL SETTING-ANALYSIS AND SOLUTIONS

A. Strengths

Borrego Springs possesses significant natural resource advantages, particularly in its infrastructure and environmental monitoring capabilities. The region's natural landscape benefits from strong regulatory protections that safeguard its desert ecosystem. The area's sophisticated environmental monitoring network, particularly its air quality system, represents one of the most advanced systems for a community of its size in California. The existing microgrid infrastructure demonstrates the community's commitment to sustainable energy solutions, while its geographic position outside the primary Wildland Fire Zone provides a natural buffer against wildfire risks. These strengths reflect a community that has successfully integrated technological solutions with natural resource management:

- Strong environmental protection measures through existing regulations (e.g., RWQCB requirements under state and federal Clean Water Acts)
- Advanced air quality monitoring system with five stationery nephelometers strategically placed throughout the region
- Existing microgrid infrastructure providing energy resilience
- Location outside the primary Wildland Fire Zone, resulting in minimal direct wildfire risk
- Sophisticated partnership between UC Irvine, Borrego Water District, and Borrego Valley Endowment Fund for environmental monitoring

B. Weaknesses

The natural landscape of Borrego Springs presents several inherent challenges. The extensive alluvial fan system, while a distinctive geological feature, creates significant flooding vulnerabilities across the valley. The desert environment's limited capacity for natural regeneration makes it particularly susceptible to long-term damage from human activities and natural disasters. The area's location along the Coyote Creek fault line introduces seismic risks that affect both natural and built environments. These geological and environmental vulnerabilities are compounded by deteriorating air quality conditions, which impact both human health and ecosystem stability.

- Extensive flood vulnerability with nearly 30,350 acres of land in alluvial floodplain
- High-risk alluvial fan flooding patterns with potential for debris flows
- Multiple properties designated as "repetitive loss properties" due to flooding
- Significant seismic risk due to proximity to the Coyote Creek fault (extension of San Jacinto Fault)

- Deteriorating air quality and public health (increases in asthma, and other diseases such as Valley Fever) from fallowed land and residual farm chemicals which release dust and toxins into air and water.
- The fragile ecosystem of Borrego is vulnerable to stochastic weather events (wind and rain, heat, etc.), work on resilience of all sectors and keep vigilant not only about current projects but cumulative effects
- Borrego needs to be vigilant and engage with politicians, lawmakers, and in advance and regional planning processes to remain informed on large energy, housing, agricultural, and extractive projects and the effect of cumulative regional projects.
- Over 72% of all land in Borrego is still native or undeveloped land but zoned rural residential with by right grading, work on creating a new conservation zone to rewild land and create a healthier overall environment for humans and wildlife
- increased desertification in the region leading to loss of vegetation and visual blight and possible change in weather due to loss of plant microclimates

C. Opportunities

Borrego Springs' Environmental Setting presents opportunities for both cultural and ecological conservation and sustainable development. The community's existing planned environmental framework, outlined in the BSCP, provides a foundation to monitor and enact conservation efforts. Programs targeting fallowed agricultural lands, Ground Dependent Ecosystems and Resilience are particularly supported by the existing Community Plan, GMP, and SGMA Grant. The unique desert ecosystem and placement within a state park continues to offer opportunities for enhanced ecotourism, while the new GMP structure amplifies opportunities for comprehensive resource protection and preservation. The nearby Red Basin Project represents a significant opportunity to restore critical wetland habitats with added air quality benefits, and demonstrates how environmental restoration can enhance multiple ecological services.

- Track Cumulative impacts on Borrego
- SGMA Grant Components 5, 6, and 8 recognize the value for a resilient Borrego in rewilding it’s many fallowed fields and disturbed lands in that:
    - restoring natural biological ecosystems will also restore many natural processes that benefit the aquifer and general wellbeing of life in Borrego.
    - Restoring natural ecosystems and processes or ‘ReWilding’ contributes net positive effects as follows:
- Reducing wind-blown sand storms which improve air and water quality and human health.
    - Native species roots stabilize and break up surface compacted soil and develop deep pathways to allow increased water filtration into the aquifer.
    - Return of native species stabilizes soil to allow reformation of biological crusts which further sequester carbon, contain loose soil, and provide add additional biodiversity in the form of microhabitats in desert interstitial spaces.
- Borrego is a true learning library with first class academic institutions, continue to utilize these resources to attract ecotourist and students synergize, capitalize, and elevate this presence in the community
- Build relationships with Community Politicians including Assembly Member Jeff Gonzalez and others
- Follow and engage on legislative bills and projects that can affect the community with unintended consequences (i.e., institutional solar projects, expediting laws that weaken

existing checks and balances between government bodies or existing laws such as CEQA and endangered species acts.

- High potential for permanent and interim conservation benefits from rehabilitation and restoration of fallowed lots through existing County, State, and Federal mitigation, acquisition, and credit (programs (development process, PACE, RCIS's, 30x30, Section 6 and other Grants, Williamson Act, and biodiversity and carbon markets)
- High potential to retain and enhance rare dark skies and quite auditory environment to support increased sustainable ecotourism and educational opportunities.
- High Sustainable Development and Resiliency Integrated planning opportunities with the resilient Water Master Plan and supporting SGMA grant.
- The BSCP outlines the desire in the community to salvage native plants subject to legal development impacts, cryptogamic soil crusts can also be harvested and used to rehabilitate fallow areas.
- The presence of state agencies and scientific non-profits in the region such as ABDSP, UCI, CNPS, and ABF as well as the school district could aid in salvage and restoration nursery operation, including offering internship and work opportunities.
- Opportunity to evoke and expand sensitive land use via education and academic internship opportunities through local, worldclass, academic, government, and non-profit program partners (i.e., including immersive hands-on training and project development by starting a native plant and biological crust salvage, nursery, and restoration program for the Community and/or work on the Red Basin Project to restore wetland habitat and reduce fugitive dust)
- Foster and support Diversity, Equity, and Inclusion throughout the Community with health and education programs and various means of outreach to reach traditionally marginalized peoples.
- Foster partnerships and opportunities with the first peoples of Borrego. Explore and opportunities for relation building through experienced tribal partners including Climate Science Alliance and other supporters of Traditional Ecological Knowledge (TEK). Apply for grants and opportunities via programs such as State "30x30", USFWS, and "Land Back" programs.
- Foster education, and sensitive preservation and access for, and to, existing prehistoric and historic resources in the community.
- Continue to encourage community uplift using citizen scientists, indigenous peoples, and historians in the community to protect and increase knowledge of the community cultural resources.
- Hold regular "Climate College" and Sustainability education opportunities for the Community to spread information on nature based solutions to living surrounded by nature, past agricultural and water impacts, and increases in stochastic weather. Class topics could include permaculture and organic gardening, integrated pest management, understanding the species around you, natural flood control (rewilding, best management practices, growing native and propagating native plants, how to enjoy our dark skies and quiet areas, etc.).
- Explore new opportunities for sustainable agriculture in the community with academic and indigenous partners including till or no till methods, permaculture, polyculture, companion planting, low water or alternatively irrigated crops, and other regenerative farming technique to augment restoration of fallowed lands in the community and increase soil health.

D. Threats

The natural resources of Borrego Springs face multiple interconnected threats, primarily driven by climate change, regional environmental challenges, and even from economic opportunities (i.e., to mine lucrative resources, or utilize the deserts wide open spaces for out of the way clean energy project). The community's desert ecosystem is particularly vulnerable to climate-related impacts, affecting everything from water availability to air quality. The proximity to the Salton Sea and Ocotillo Wells Off-Road Vehicle Recreation areas introduces additional environmental pressures through dust storms, lithium mining, and other air quality degradation mechanisms. The increasing prevalence of Valley Fever (caused by a soil fungus) also represents a significant public health concern linked to environmental conditions. These environmental threats are compounded by development pressures, enforcement staff shortages, and infrastructure challenges that could potentially compromise the region's natural resources:

Natural Setting and Climate change impacts include:

- Public health through increased temperatures and frequent power shut-offs
- Drought conditions and past unsustainable use of water and natural resources
- Reduced wetlands
- Air quality deterioration
- Reduced surface water availability
- Reduced Groundwater recharge from natural and climate induced weather patterns, pumping, compacted soils, diversion, lack of recycling, and waste.
- Dust storms from the Salton Sea area increasing hazardous particulate matter
- Rising asthma, Valley Fever cases and other respiratory conditions in the region
- Pressure to convert/impact Agricultural Reserves and Sensitive Deserts Lands for non-local energy generation and/or long-distance infrastructure projects
- Flood-related development constraints impacting commercial revitalization
- Power grid vulnerabilities during regional emergencies
- Increased recreational impacts from use e-bikes and other silent mobility vehicles or other advanced wilderness gear; while they offer increased access opportunities, they must be balanced with the need to maintain trail widths to retain biological crusts, soil, and species; and continue to allow quite space and time for animals resting, foraging, and nursery sites throughout the region.

5. PLANNING SETTING

A. Governance

Borrego Springs is an unincorporated community far removed from the majority of San Diego County and has little local governance. It is overseen by 5th District County Supervisor, 38th State Senate District, and 71st District Assembly. All land use planning is subject to County approval, governed by the County General Plan and the Borrego Springs Community Plan. The Anza Borrego Desert State Park has jurisdiction over much of the land surrounding Borrego Springs, but no authority outside the park boundaries.

1) Countywide General Plan Authority

County of San Diego's General Plan (GP 2011) Land Use Element is a framework that provides maps, goals, and policies that guide planners, the general public, property owners, developers, and decision makers as to how lands are to be conserved and developed in the unincorporated County. The first section, Land Use Framework, defines the categories of use to be permitted. These are defined at two scales: (a) broadly defined regional categories differentiated by character and overall density and (b) detailed categories that break-down the regional categories into more precise land use types, population densities, and development intensities.

The Land Use Maps Appendix presents the Land Use Map depicting the allocation of these categories to all unincorporated County lands based on the General Plan's Guiding Principles in Chapter 2 (Vision and Guiding Principles). The Land Use Map serves as the regulatory document guiding land use, conservation, and development. The final section presents the goals and policies that carry out and amplify the intentions of the Land Use Map.

2) Community Plan Authority

While the Land Use Element inclusive of Land Use Maps and Goals and Policies applies to all lands throughout the unincorporated County, there are special land use issues and objectives that uniquely pertain to each of its diverse communities. These are addressed by Community Plans in which goals and policies are defined to provide more precise guidance regarding the character, land uses, and densities within each community planning area. Though Community Plans are a part of this General Plan, they are bound separately and must be referenced in determining the types and density of land use that may be considered for any property within the community planning area.

B. Relationship to Adjoining Communities

Since the town is completely surrounded by the 600,000-acre Anza-Borrego Desert State Park, Borrego Springs is the most isolated San Diego County community. It is over an hour's drive to any "full-service" town. The nearest neighbors are Ocotillo Wells, Shelter Valley, Ranchita and Salton City, all very limited-service communities. Geographically Borrego Springs is a small town centered literally in the heart of the Anza-Borrego Desert State Park and is positioned as 'the gateway' or hospitality hub for the Anza-Borrego Desert State Park. This nexus connects the planning and management of the Borrego Basin with the Anza-Borrego State Park, which basically serves as a surrounding watershed. Connecting them not only in a physical systems sense but also in an economic development and land development sense.

The town is the primary gateway for visitors to Anza-Borrego Desert State Park, which surrounds the community on all sides, is a National Natural Landmark, and part of a larger International Biosphere, which encompasses both the Colorado and Mohave deserts (**Ref. 95 - FIGURE 33**). ABDSP is the largest desert State Park in the nation (635,000 acres) and one of the largest protected areas in the west. It also achieved distinction as a part of the University of California (UC) Natural Reserve System (**Ref. 96**), added in 2011, and its University of California at Irvine Anza-Borrego Desert Research Center (**Ref. 97**).

Borrego Springs is located about 90 miles from San Diego, California's 2nd largest city, which drives Borrego's national and international visitation to exceed 500,000 tourists each year. Despite this popularity, perceived level of development pressure in Borrego has not translated into frequent planning updates or modernization of desert policy by the County. Due to distance to major urban and suburban areas, high temperatures/weather extremes, and limitation on water availability; planning attention has been minimized to the detriment of the Community. While not readily apparent; adjacent community, renewable energy and extractive projects now warrant County assistance to ensure Borrego's community vision and environmental heritage are not compromised by massive transmission lines and pipes leading to the coastal population bulk. In this vein, natural habitats and sensitive species require adequate planning now to ensure their survival from these new projects, but also from climate change challenges.

C. Sensitive Species and Habitat Management

1) Local, State, Federal and International Biological Protection Designations, Programs, and Indices for Planning

In the "Physical Setting" section, existing prior biological planning concepts and designations were discussed including the County RCA designation. The Anza Borrego State Park, and the UN Biosphere Reserve These designations, however, offer little protection to the 50 square miles of potential biological resources within the BSCP area, or assurances that connectivity corridors will be adequately planned. The RCA designation has no concomitant guidelines within the County's Biological Mitigation Ordinance and has no codified protection in their General Plan or related land use policies. The State Park while surrounding the Borrego Community has little direct planning power over the management of developed and natural lands that abut them.

Moreover, the Biosphere Reserve is more of an honorary designation recognizing the value of the southwest's unique deserts, but with only voluntary compliance required (**Ref. 98 – FIGURE 34**). Without the benefit of a comprehensive combined state Natural Communities Conservation Plan (NCCP) and federal Habitat Conservation Plan known as a Multiple Species Conservation Plan, comprehensive planning for Borrego's unique natural habitat will be left to 'project by project' planning, rather than comprehensive regional planning (**Ref. 99 – Figure 35**).

While the County of San Diego took part in the County's Regional MSCP Planning Process in 1998, they have adopted only one of their three related subarea plans in the 27 years since (**Ref. 100 – Figure 36**). The Regional MSCP (**Ref. 64**) within the County of San Diego is a conservation planning program designed to establish a connected preserve system that ensures the long-term survival of sensitive plant and animal species and protects the native vegetation found throughout the incorporated and unincorporated County. The MSCP

addresses the potential impacts of urban growth, natural habitat loss, and species endangerment and creates plans to mitigate for their potential loss.

The County Regional MSCP Plan covers 582,243 acres over twelve jurisdictions. Each jurisdiction has its own Subarea Plan; however, there are only minor differences in how each is implemented. The MSCP is an important program that significantly contributes to the County's General Plan, which has identified its watershed protection policies and defined its climate change goals.

The premises of the Regional and subarea County MSCP Programs as well as the County (BMO), requires avoiding, minimizing, and/or mitigating sensitive habitat by a variety of measures and/or policies often encountered in guidelines or agency practices. Biological mitigation may include developing the least biologically sensitive areas and clustering remaining development into a smaller space to accommodate wildlife corridors and preserve development. Additionally piecemealing projects under CEQA so the full picture cannot be analyzed in its entirety is also prohibited. The actual full project must be presented during scoping even if it will be carried out in phases.

CEQA, and its biological mitigation practices, discourage removing existing land protections, such as vacating a conservation easement for a prior mitigation site or otherwise designated open space, and will result in 2:1 replacement because moving the mitigation credits off one site and placing them in another habitat site still results in a net deficit of habitat. For example, when a site is developed in the former mitigation site, decision-makers will need to mitigate for the credit loss and for the additional habitat impact too. Finally, in kind or equivalent mitigation on various levels is usually required or mitigation ratios can again rise. For example, impacting a coastal habitat but proposing to mitigate inland on similar habitat that may be under less development pressure is often discouraged by increase mitigation ratios equivalent mitigate that rarer and more costly coastal parcel. may be discouraged or disallowed by various policies.

While the County has been drafting the North County MSCP Plan (NC MSCP) for decades, and the Planning Agreement for the NC MSCP and the East County (EC MSCP), the NC MSCP draft MSCP planning agreement is currently proceeding after prior attempts in 2005, and 2018. Recently, the 3rd Restated and Amended NC/EC MSCP Planning Agreement expired on January 31, 2025. However, the Wildlife Agencies have confirmed that the County is in the process of renewing the agreement (Appendix - NC EC MSCP Planning Agreement).

Borrego Springs is located, within the tan overlay and within the desert region shown on the map above. A preliminary list of 157 "MSCP Covered Species" has been created in the EC MSCP and "Focused Conservation Areas" have been mapped. The County and Wildlife Agencies have committed to adhering to the agreed upon parameters thus far, in the interim between now and adoption. Please note, the EC MSCP incorporates the existing County RCA grid and expands to protections to additional FCA areas.

The program provides various strategies for conserving native habitats and species. The strategies may include but are not limited to conditions of coverage, adjacency guidelines, developing the least biologically sensitive areas via unit clustering/ transfer of development lots by acreage to a smaller portion of the site, such as when increasing density in the least biologically sensitive portions of a site. Another benefit of the EC MSCP is that planners, developers, and conservationists alike have developed these plans and will benefit from the

certainty and consistency provided by their plan, rather than apply for individual "take permits" through the lengthy, uncertain, and expensive CA (CESA) and federal endangered species acts (FESA).

The County's General Plan Regional Categories "Rural" areas largely overlap but are slightly more extensive than the FCA designated conservation lands. The BSCP had one existing designated RCA which encompasses two areas of Mesquite Bosque, a large historical area and a smaller prehistoric culture area east of Borrego Sink. The BSCP plan also proposed incorporating addition RCAs to add four additional 'elements,' which are importantly not physical 'areas.' The importance of using elements over areas can play out either positively or negatively for the resources as identified 'elements' in the community may be subject to intentional destruction or degradation before official protection. While identifying 'areas' assures more distinct focus and protection, it could leave out important seasonal appearances, future areas being discovered, or new areas forming due to climate change or other factors.

The EC MSCP is habitat based and includes large swaths of contiguous and connected lands with appropriate habitats broad enough to support all 'covered species. Other important indices for sensitive habitat and species include the California Natural Diversity Database or CNDDB, which shows map instances of species filed by biologist in the field with through California Department of Fish & Wildlife (CDFW). Areas of Conservation Emphasis (ACE) is another CDFW tool that combines the best available map-based data in California to depict biodiversity (**Ref. 101 - FIGURE 37**), significant habitats, connectivity, climate change resilience, and other datasets for use in conservation planning (**Ref. 102 – FIGURE 38**).

As shown on Figure 37, the California National Diversity Database (CNDDB) or California Special Status Species contains text and spatial information on California's special status species (rare plants and animals). It is a positive detection database. Records in the database exist only where species were detected. This means there is a bias in the database towards locations that have more survey work. Also, the database is proprietary and shall be displayed at such a scale (no larger than a scale of 1:350,000). As shown on Figure 38, this ACES map shows a combined Species Biodiversity Summary that is most meaningful for determining priority areas for protection.

The combined the three measures of biodiversity developed for ACE into a single metric:

- Native Species Richness
- Rare Species Richness; and
- Irreplaceability

Using this combined index results in much of western flank of the Borrego Springs Subbasin ranked as "high species biodiversity" areas (grey hexagons) that can be included in the next BSCP to inform high priority areas for conservation. The Work Plan includes activities associated with implementation and continued planning, development, and preparation of groundwater sustainability for the Borrego Valley Subbasin and the resulting work from this grant will incorporate appropriate Best Management Practices as developed by DWR. Of the eight SGMA Grant Components, three of them (5, 6, and 8), especially relate to species, and habitat management and protection. Although all components are running concurrently under the SGMA grant, important preliminary data and guidance has already been made

available through draft reports and documents and are incorporated throughout this White Paper. Component 5 (Resiliency Strategy) and 6 (Fallowed Lands Restoration) have been introduced and discussed above. Below is an overview and discussion of Component 8 (Groundwater Dependent Ecosystems).

2) SGMA Grant Component 8: Groundwater Dependent Ecosystem (GDE) Identification, Assessment, And Monitoring

Component 8, under UCI as Implementing Agency, will provide essential data to UCI water management planners and affected citizens of the region during implementation of the GMP for the Basin. Impacts upon GDEs is a sustainability indicator identified in the Basin's Groundwater Management Plan. This component focuses on determining if native ecosystems that were once indisputably groundwater dependent; are, or are not, still at the present time utilizing groundwater; and if so, to what extent due to declines in the water table over the past several decades.

This component will also analyze if groundwater that supports the GDEs will be impacted by changes in the groundwater elevations; and how, or how not, the GDEs themselves are affected by these changes. A comment letter from The Nature Conservancy explained the circumstances under which a groundwater dependent ecosystem might or might not be able to access ground water and is included below as Figure 34. Note the draft GSP (**Ref. 103 – FIGURE 39**) which was the precursor to the adjudicated draft final GMP released in 2020. (**Ref. 104 - FIGURE 40**).

As reduction of the Mesquite Bosque near the Borrego sink has occurred in response to the lowering of the water table. Component 8 is using an established method of comparing the isotopic signature of the groundwater to the predominant isotopes found in the local plant. Several data sets are being captured to enable a calculation to determine if the plant assemblage and supported fauna at the proposed GDE could survive only with access to surface water. These data sets are:

- A complete inventory of the plants and fauna in the potential GDE
- A water needs assessment of that plant assemblage found at the potential GDE
- Determining the availability of surface water at the potential GDE.

If data from existing monitoring wells is found to be insufficient, a dual-nested monitoring well will be constructed near or within the Borrego Sink. Definitive preliminary data (**Ref. 105**) has already determined through isotopic analysis that surviving areas of Mesquite Bosque are clearly still accessing groundwater, and that the aquifer's restoration and availability will be critical for this life-sustaining species and habitat. Its beans and seeds are eaten by many animals and its branches shelter the migratory endangered least Bell's vireos and their young as they nest here annually to survival.

D. Biodiversity and Cultural Hotspot

Due to its varying terrain and ecosystems, from the sea, to estuaries, to coastal terraces, inland mountains, and eastern deserts. San Diego is known to be the most biodiverse county in the continental US. San Diego is also known to be collaborative and on the cutting edge of conservation planning. The City and San Diego produced some of the very first pro-active, multiple species conservation programs and plans in the nation in the 1990s. Prior to that,

endangered species acts enacted in 1970 were carried out in a species-by-species fashion in a reactive manner, often resulting in poor mitigation sites and viability.

Recently the importance of San Diego County a biodiversity hotspot was highlighted once again through a partnership with the County's MSCP programs, SANDAG's Environment Management Program (EMP), the SD Natural History Museum and many land use professional from the regions local, state, and federal municipalities and regulatory agencies. This meeting produced renewed commitment and several important biodiversity planning documents including the following for the San Diego Region and its desert empire (**Ref. 106 – FIGURE 41**).

While biodiversity interest and attention in San Diego has been high since the 1980s, the profile of the regions prehistoric and indigenous cultural heritage has only been gaining significant traction since around 2012. Climate change and the realization that "Traditional Ecological Knowledge" (TEK) practiced by indigenous people could help restore balance to the earth once again, has accelerated interest. While Borrego's BSCP included significant and progress goals to preserving cultural resources, a significant problem in the area is that some developable land encroaches on cultural sites and structures.

It is estimated that although 75.2% of the land is still undeveloped or native land, that land is nearly all slated by the County's zoning code as rural residential rather than designated or legally preserved conservation land, which allows grading by right and other damaging planning practices to occur. This also makes it difficult to identify and preserve Borrego's cultural history, both indigenous and modern due to lack of CEQA planning, monitoring, and oversight for small projects. See also the "Environmental Setting Analysis and Solutions" above about restoring and protecting more native land in Borrego Springs, to not only improve biodiversity, but also public health.

Additionally, when CEQA is evoked and monitoring and environmental impact reports are produced, much of acquired data is proprietary and only available to professional archaeologists and Native American tribal designees monitors in order to protect resources. It is necessary to protect this sensitive data in this way to deter pot hunters and destruction of valuable human history, and due to a customary lack of funding for staff to curate and protect them. All planners, and Borrego residents alike, however, should be mindful and aware of these issues and utilize best practices, respect, and required elements for Native American noticing, and standard and local initial study investigations (i.e., from CEQA Appendix G).

Currently, the Old Borego town site is the only cultural site with the Historic District Preservation (H) Special Area Designator. However, the local history committee has identified 40 other potential significant sites in the CPA. These sites include mesquite bosque areas associated with early indigenous use.

Governor Newsom's 30x30 initiative has been adopted across the nation and by over 190 countries in a bid to conserve 30% of natural lands and waters by 2030 to stave off biodiversity loss and insure humans a sustainable future in the face of climate change and the increasing burden of human population size. This program is important as one of the goals of 30x30 is to incorporate reintegration of Native Americans on the land. The "Land Back" programs expanding across the Nation and utilize their (TEK). Importantly TEK should be incorporated for fire management throughout the region as humans have sustainably managed the land and fire regimes for eons in the past, whereas today when humans are excluded, ecological damage compounds. Reference the cultural work of David Bainbridge, UCR, and Biosphere Reserve

Management of indigenous cultures taking place in Honduras (Rio Platano Biosphere Reserve), and in Panamal. And management of Darien Gap is led by Kuna tribes (**Ref. 107 – FIGURE 42**).

E. Town Planning

Town Planning involves processes undertaken by municipal planning departments to visualize, plan for, coordinate, and act on the three-dimensional physical layout of the town. This includes the zoning of different areas for various uses, such as residential, commercial, and office spaces. It also includes the subdivision of public property and the creation of public streets and park spaces. In addition, it takes into consideration the economic, transportation, political, legal, environmental, utility and sanitation infrastructures.

The goal of town planning is to achieve a desired urban form and to ensure that a certain level of accessibility, walkability, adaptability, efficiency, and economy are built in and adapted to over time. The public streets and spaces provide the long-term framework for building a town. And private development provides the day-to-day life within this framework is allowed to change and adapt as needed.

Today, town planning discussion have been dominated by housing, zoning, zoning permit processes and its regulation on private property. However, this focus on zoning can sometimes overlook the more permanent and important patterns of subdivision, which involve the ordering of public and private property. Therefore, the challenge in town planning is to balance these two domains of zoning and subdivision, public and private realms, to create a town that is healthy, safe, and welfare-promoting. The foundation of town planning elements Involve:

- Development Patterns – Suburban to Urban Street/Block Types
- Public and Private Spaces and Buildings – Location and Scale
- Planning Types – from the Region to the Lot
- Place Types – from Pristine Nature to the Town Center
- Community Character – From Memory to Expectations

Town planning policy forms the rules and regulations that govern the use, ownership, and management of urban and rural lands. It involves both rational and emotional decisions about how the federal, state, and local authorities determine land uses, who are allowed to access to it, and what activities are permitted on it. These policies trend with collective social consciousness between individual property rights and common public good at both national and local levels.

Land policy generates both formal and informal outputs. Formal outputs are often plans, regulations, and programs. Informal outputs are often socially accepted patterns that shape underlying cultural behaviors and social expectations. The study of land policy was founded during the early 20th century's Progressive Era in response to economic and environmental instability generated by industrialization's overwhelming amount of poverty and pollution. Today's global political instability may suggest in the near future a new era of town planning.

1) Existing General Plan Land Use

Most of the land in Borrego Springs, 42.5 square mile radius, is zoned as Rural Lands, some Semi-Rural Residential, and a sprinkling of General Commercial and Rural Commercial. There are also a few industrially zoned land uses related to jobs-based

businesses. The larger Borrego Valley comprises 110 square miles and is defined by its open desert lands and mountains that surround Borrego Springs.

County General Plan 2020 United States Geological Survey report (Scientific Investigations Report 2015-5150) estimated the percent of overall land use in 2009 in the Borrego Valley Groundwater Basin as the following. Approximately 72.5% of land is native vegetation, generally desert-type vegetation, while 5.6% of land is phreatophytic vegetation, e.g., plant communities with deep roots that depend on groundwater, like mesquite. An additional 11.1% of land is dedicated to residential or developed land while 3.6% of land is dedicated to citrus farming, 3% dedicated to golf courses, 2.1% to fallowed agricultural land or dedicated to livestock, 1.2% was dedicated to potato farming, and 0.9% was dedicated to dates, palms, or other nursery types.

2. Existing Community Plan Land Use

The Borrego Valley is surrounded on three sides by mountains: the Santa Rosas to the north, the San Ysidros to the west, and the Grapevine Hills to the south. To the east, the mud hills of the Borrego Badlands stretch off toward the Salton Sea. The area has been a major transportation corridor due to its geography and water sources. Native American migrations, Juan Bautista de Anza's inland route to San Francisco and other missions, stagecoach routes, the gold rush, Mexican War troop movement, ranchers and cattlemen, farmers, and settlers. All followed the same routes in use today and used the same water sources.

Borrego sustains a community of over 3,000 permanent residents, 5,000 seasonal residents, six golf courses, 11 lodging establishments, a university research center, two airports, five electric vehicle-charging stations, and a community medical center. It hosts numerous arts, architecture, music, environment, sport, and recreation events and experiences annually. And Borrego has a distinctive desert sense of place, and is a gateway to unique natural experiences.

Described as a "Village in a Park," Borrego is a rural small town set within the second largest state park in the United States. Most residents identify with basin conservation, quality of life, open spaces, and long vistas. Balancing the needs of residents, visitors, and businesses, including agriculture, with the conservation of natural and cultural resources is one of the premier tasks of the BSCP.

The growth of the low desert valley is uniquely limited within the closed perimeter of the park boundaries. Its remote location is not easy to get to, and other than tourism, there is no major industry or source of high-quality jobs. 4,000 acres are devoted to agriculture, and the majority of commercial and residential property is undeveloped.

The Borrego Springs community was envisioned by early resort developers in the 1940's as a new desert town to compete with Palm Springs and other resort communities accessible from Los Angeles, San Diego, and other points beyond in California, Nevada, and Arizona. While other post war Southern California communities have grown exponentially since the 1950s, Borrego Springs has grown very slowly.

The town's slow growth is mostly due to limited access and lack of adequate employment, which created large gaps in the development pattern and timeline. The planned single family residential development requiring substantial infrastructure of roads and utilities resulted in

the eventual sale of lots over time due to the increasing demand for second homes. The present result is a lack of actual building of houses on residential developments. Commercial lands were also left vacant.

Land use patterns are very low density and follow the 1940's design for the New Town Movement of the 1920/30s. The core of the village is Christmas Circle Park which serves as the town center and is a traffic circle similar to those applications in Mexico. Commercial businesses line Palm Canyon Drive (S-22) from Stirrup Road to the east to the entrance of the State Park on the west. And the mid-century architectural style of this era continues to define it's built character.

Borrego Springs has a variety of golf resorts located away from the town center which provide recreation as well as a various types of housing for residents and seasonal visitors. Subdivisions are located mainly to the northwest and south of Christmas Circle and generally follow the availability of water lines provided by BWD. Followed citrus and ornamental tree farms are in the north end of the Valley. Tourism has become the primary source of income during the winter season while summers have less tourism.

F. Community Planning and Design Characteristics

Borrego Springs is a unique San Diego County community, with no traffic lights and few streetlights or sidewalks. Homes and humans share the natural desert landscape with abundant native plants that provide precious habitat to the many wild animals. This "Village in a Park" is truly a "desert island."

Interconnected with the natural environment, the built environment significantly impacts the social, environmental, and economic viability of Borrego. Community design includes everything we see around us, including, but not limited to buildings, landscapes, roads, signs, fencing, lighting, and power poles. With its hospitable winter temperatures and extremely hot summers, the landscape is arid with flora and fauna uniquely adapted to the intensity of the summer sun as well as the cool winter nights. Its climate and landscape are the primarily the reason the town exists today.

Geography in the valley is generally sloping alluvium posing a significant flood risk as well as long vista views. Although land is relatively cheap, lack of building in both sectors is due in part to the FEMA designating most of the valley as a flood zone. This makes construction costs in most areas relatively high and often prohibitive compared to other communities in the region. Due to this cost, very few new commercial buildings have been built in Borrego Springs as recent building is mostly detached residential homes. However, over the last few decades only very few residential buildings have finished constructed.

As quoted from the BSCP local building design themes are mostly inconsistent with historical or natural desert elements. However, much of the built environment at present is not what is typically considered to be desert imagery/ The predominate building style is either conventional architecture found anywhere or mid-century modern. The built environment reflects imported styles and building techniques, resulting in a lack of identity that bonds with the natural surroundings.

New projects, walled communities and residential fencing are being built in a manner that negatively impacts wildlife corridors, natural water flow, and connecting open space. Progress on, and how Borrego will fulfill any remaining vision statement of the BSCP "Community Vision"

is the next step for the any future planning effort. This paper based its community development recommendations on community input and feedback. An example is the following Community Survey completed in 2024:

1) Community Input - Survey Summary (2024)

In 2024 a Resiliency Focused Community Survey (see Appendices for the complete survey information) was distributed throughout Borrego with the following key demographics and major community design findings:

Relationship to Community
- 75.6% live in Borrego Springs
- 53.0% own property
- 17.3% work in the area
- 7.1% are visitors

Residency Status
- 57.1% year-round, full-time residents
- 26.8% seasonal residents (primarily winter)
- 0.6% seasonal residents (primarily summer)
- 5.4% non-residents

Age Distribution
- 53.6% aged 65+
- 30.4% aged 46-64
- 6.5% aged 25-45
- 9.5% under 25

Racial/Ethnic Composition
- 73.2% White/Caucasian
- 18.5% Hispanic/Latino
- 3.0% Asian
- 1.8% American Indian or Alaska Native
- 0.6% Native Hawaiian and Other Pacific Islander

Major Findings include “Community Satisfaction” and “Quality of Life” Indicators:
- 80% report a strong sense of community
- 79.5% feel satisfied with their quality of life
- 71.9% feel safe at night
- 84.3% agree there are sufficient public parks and open spaces

Primary Community Attractions:
- Access to nature (76%)
- Quality of life (68%)
- Rural atmosphere (66.7%)
- Sense of community (60%)

Healthcare Services
- 74.7% prioritize healthcare access
- 70.3% concerned about insufficient medical services
- 78.4% support medical care development

- Healthcare ranks as top desired industry (76.3%)

Water Sustainability
- 92.9% aware of aquifer as sole water source
- 84.5% aware of required 70% reduction by 2040
- Water Costs:
 - 46.6% pay $50-100 monthly
 - 43.6% pay $100-200 monthly
 - 9.8% pay over $200 monthly

Housing Affordability
- 73.2% perceive housing shortage
- Affected Groups:
    - 92.9% Low/moderate income families
    - 45.1% Senior citizens
    - 40.7% Assisted living needs

Infrastructure Priorities
- Natural resource protection (59.5%)
- High-speed internet access (55.4%)
- Sustainable water management (41.9%)
- Reliable public utilities (36.5%)

Water Sustainability
- Implement comprehensive conservation programs
- Develop tiered water pricing
- Launch public education campaigns
- Explore water-efficient housing solutions

Housing Strategies
- Develop mixed-income housing
- Focus on senior/assisted living facilities
- Encourage multi-family development
- Implement sustainable building practices

Infrastructure Development
- Secure high-speed internet funding
- Create sustainable infrastructure plans
- Develop integrated trail systems
- Support EV infrastructure

Economic Development
- Focus on sustainable tourism
- Encourage R&D industries that also protect the priority of natural landscape conservation
- Support healthcare/tourism businesses
- Develop workforce training programs

Sustainability
- Balance development with water restrictions:
- Preserve natural resources
- Maintain rural character

- Support sustainable tourism
- Update Community Plan and zoning recommendations

Community Development
- Focus on age-diverse design
- Improve essential services
- Protect natural amenities
- Enhance community connectivity

Community Plan Update Issues Recommendations
- Healthcare Development
- Prioritize healthcare provider recruitment
- Develop telemedicine infrastructure
- Explore public-private partnerships
- Create medical facility development plan

2) Community Design and Character Analysis and Solutions

a) Community Development Model Approach

The County's General Plan Land Use is structured by its Regional Categories Map, Figure LU-1. Its overall planning structure outlines community centers as Villages, it's supporting less urban areas as Semi-Rural lands, and its more rural and natural areas as Rural lands. These three (3) regional-scaled categories depict the general distribution, location, and extent of the uses of the land for housing, business, industry, open space, education, public buildings, and other categories of public and private uses of the land from more urban to more rural (**Ref. 108 – FIGURE 43**).

When applied to Borrego, the Community Development Model is implemented by three regional categories— Village, Semi-Rural, and Rural Lands— and directs the highest intensities and greatest mix of uses to Village areas, while directing lower-intensity uses, such as estate-style residential lots and agricultural operations, to Semi-Rural areas. The Semi-Rural category may effectively serve as an edge to the Village, as well as a transition to the lowest-density category, Rural Lands, which represents large open space areas where only limited development may occur. Tribal Lands and Federal and State Lands, including Anza Borrego Desert State Park, are assigned to the No Jurisdiction Regional Category.

The County's Community Development model enables the following recommendations for the Village and Semi-Rural areas in Borrego's future Community Plan update:

Green Infrastructure. Incorporating the intergradation of natural elements such as plazas, parks, green spaces, waterways, and green roofs into the community building fabric. Green infrastructure helps mitigate the urban heat island effect, improve air quality, manage stormwater, and provide recreational opportunities for visitors and residents.

Resilient Community Planning. With the increasing impact of climate change and natural disasters, resilience planning measures a Village's ability to weather environmental crises. The county's Hazardous Mitigation Plans, and disaster adaptation audits provide physical plans to protect resources and people in-place. Adaptation tools

include hardening the Village center's edge by clearly delineating Village and Semi-Rural areas with green infrastructure, such as fire breaks and flood management strategies. Communities are developing resiliency strategies to adapt to changing environmental conditions, mitigate risks, and ensure the long-term sustainability of the Village center and Semi-Rural neighborhoods.

Adaptive Reuse and Regeneration. Focus on building in underutilized areas and vacant lands within the Village center. Converting old industrial buildings, warehouses, and heritage structures into mixed-use developments, cultural hubs, or creative spaces contributes to urban regeneration and preserves architectural heritage.

Health and Well-Being. This incorporates the above green infrastructure spaces and places by promoting access to nature, designing active transportation infrastructure, and integrating health-oriented amenities like fitness areas, walking paths, and urban gardens.

Social Equity and Inclusive Planning. Community plans should address issues of affordable housing, access to services, and social infrastructure in marginalized communities. Affordable housing is subsidized by local, state and federal incentives. Attainable housing is allowed via flexible and streamlined processed zoning and subdivision rules. The state assembly is leading the way on these rule and subsidies with new state laws annually. And before these new rules are adopted, county planners must engage the community in the process to ensure that planning decisions reflect the needs and aspirations of all residents.

Mixed-Use Development. Enable mixed-use development, which involves integrating residential, commercial, and recreational spaces within a single neighborhood or Main Street. This approach aims to create places where people can live, work, and access amenities within proximity to Village center destinations.

Multi-Modal Mobility Connections. More sustainable transportation options to reduce reliance on private vehicles. This includes expanding public transit networks, improving cycling infrastructure, implementing bike-sharing programs, and promoting bicycle and pedestrian-friendly streets. Building compact centers and connected neighborhoods centered around mobility hubs with public bus and private shuttles connect the Villages to the community and region. These mobility hubs are intended to reduce reliance, and lower greenhouse gas emissions, on private vehicles by promoting public transportation, walking, and cycling. A mobility center hub makes it easier for residents to access essential services and reducing reliance on single-use automobiles for every daily need in the Village lands.

Placemaking. This approach involves low-cost, temporary interventions to test and experiment with new planning and urban design ideas, such as those listed above. Placemaking projects, such as pop-up parks, pedestrian-friendly installations, or temporary street closures, allow for community engagement and provide opportunities for quick improvements. It is also used to measure positive or negative outcomes before the infrastructure is built out.

b) Community Design Guidelines

While standard and voluntary building codes mentioned above should be utilized, developing community led design guidelines would be one method to build consensus and develop a cohesive, consistent design signature for the Community. Such guidelines may be developed for a distinct community sector, or as a signature for the whole community. Gleaning from efforts of other nearby counties, and international desert communities such as Palm Springs, Indio, Joshua Tree (oasis themes), Casablanca, Chile, and other communities which may have strong sustainable planning is recommended (**Ref. 109**). Note that Joshua Tree's 2020 Community Action Guidelines have distinct parallels with this planning process and elements could be perused and perhaps "borrowed" for possible design and format suggestions.
(**Ref. 110 – FIGURE 44**).

c) Desert Design Theme

For development enclaves within Borrego, one or more distinct design and signage district's theme and palettes could be chosen for the Community. For instance, if the community decided to utilize a signature style featuring 'natural desert elements' such design themes often feature warm, neutral, and/or deep saturated colors found in natures twilight - of burnt oranges, greens, browns, reds, and pinks (such as terracotta; warm deep ambers; deep or yellow (warm) greens; shades of tan, sand, terracotta; and rich hues of dusty ochres).

Natural materials which evoke or enhance its arid atmosphere, such as leather, rattan, cool dark stone, and linen, and lightly woven textures, which result in a color saturated, but uncluttered feel, can be used to create light-filled, interior spaces and exterior spaces that feel like, and blend into the desert. A goal can be to create a soothing ambiance and a connection to nature. To that effect, building exteriors should blend in with the natural terrain in color and stature (simple mid-century modern design with color saturated smooth or textured plaster), typically being low slung with care in orientation to maximize beneficial views and breezes while reducing harsh glare or flood risks.

Landscaping should feature water smart, non-invasive mostly Coloradan native plants (or those from the greater Sonoran Desert) chosen for their architectural impact, seasonal color, or pollinators support function. Garden elements and fences should ideally be made of native rock and found material, such as ocotillo skeletons, weathered wood, and native colored gravel – which is light colored and water permeable as opposed to asphalt which is dark and hot, and concrete which is impervious to natural soil function and water integration. Rooftops and windows, however, should consider heat gain and loss and feature heat reflection features, such as white or tan roofs and UV treated windows. Additional wildlife friendly designs can be incorporated with bird strike safe glass; nectar, seed, salt lick, dust, and water stations, which are approved to be non-impactive to migration, health, and native habitat can be utilized.

The following are examples of desert theme design pallet:

Woven textures. Woven baskets, macrame wall hangings, rugs, and throw pillows
Clean lines. Sleek yet rough, desert modern interior design is a balance between modern and earthy
Rich colors. Rich hues evoke a desert scape

Visual interest. Reduce clutter while emphasizing visual interest through texture
Light-filled spaces. Balance light-filled spaces through scale and height of décor and furniture

For further reference, examples and resources from Palm Spring's famous mid-century architecture may be of interest to future policy directives (**Ref. 111 – FIGURE 45**). Mid-century modern architecture in Palm Springs, California is characterized by clean lines, open floor plans, and an emphasis on natural light. These homes often have flat roofs, tall windows, and geometric shapes.

Design features include:

Clean lines. Simple, basic lines with rectangular windows and doors
Open floor plans. Create a sense of balance and harmony
Natural light. Seamless indoor-outdoor living spaces
Organic forms. Curved contours and flowing lines inspired by nature

Notable examples include:

Kaufmann Desert House. Designed by Richard Neutra in 1946, this iconic home features large sliding glass doors and open floor plans
Twin Palms. Designed by E Stewart Williams for Frank Sinatra in 1946, this estate is known for its piano-shaped pool
Frey House II. Designed by Albert Frey, this home is built into the side of a large boulder Preservation efforts

d) Green Building Code

California has multiple building codes, which are all part of the California Building Standards Code (CBSC), which is Title 24 of the California Code of Regulations (**Ref. 112**). Importantly, the County adopted the Green Building Code in 2022, which is made up of both mandatory, and voluntary incentives. The green building code reiterates and incorporates components of many other voluntary "green building" standards found around the world including LEED (Leadership in Energy and Environmental Design), Energy Star, and the Living Building Challenge. More information about these programs is available on the websites of national and local chapters of the US Green Building Council (USGBC) who manages the LEED program and conducts regular trainings and various certification programs.

Additionally, other concepts can be considered as desired and as technology improves. These may include Net Zero Development aims to produce zero net greenhouse gas emission over its lifecycle, projects that recycle and reuse all water, Moral Architecture, Biophilic, Biomimicry, or Nature Based Solution designs. These emphasize, incorporate, or copy natural biologic or landscape systems. Organic and Sustainable Landscape and Interior Design concepts may also be useful in Borrego to incorporate form and function in harmony with the surrounding natural lands.

e) ADA, Accessibility, and Universal Design

While Title 24 in California does require accessibility features for people with disabilities, under the US Americans with Disability Act or ADA, does not explicitly mandate "universal design" as a standard. It allows for the voluntary incorporation of universal

design features through the "New Home Universal Design Option Checklist" which builders can offer to buyers upon request. This makes universal design an optional feature within the accessibility requirements of Title 24.

Universal Design includes features that make it possible for new and remodel architecture to make it easier to age in place or live with disabilities. Feature may include sturdy railings and wider in entry ways into the dwelling and into all rooms such as bathrooms and can include counters of lowered height with clearances that can accommodate wheelchairs. Typically, the homes may be single story and or feature accessibility components such as ramps, elevators, or motorized stair chairs. Other features may include visual or braille signage and the like. The state's Housing and Community Development provides local jurisdictions a universal design checklist (**Ref. 113 – FIGURE 46**).

f) Visual Graphics / Signage

The BSCP states, "Signage in the Borrego Valley consists of a broad variety of materials, colors, styles, and size of components, not all of them particularly suited or designed for the demands of a hot, dry, and sometimes very windy desert climate. These elements produce confusion and visual chaos for visitors, who experience wayfinding fatigue. The size of economic loss likely due to poor / absent signage is unknown." The relevant to today plan recommends general themes that incorporate the desired "vibe" or vibes of various parts of the community, which must be developed via community input. Important wayfinding signage could include flower fields and additional interpretive/protection signage where appropriate.

G. SOCIOECONOMICS

In 2022, Borrego had a population of 2,950 people with a median age of 58.8 and a median household income of $101,458. Between 2021 and 2022 the population of Borrego Springs, CA grew from 2,566 to 2,946, a 14.8% increase; and its median household income declined from $103,390 to $101,458, a −1.87% decrease (**Ref. 114**).

The five largest ethnic groups in Borrego Springs, are White (Non-Hispanic) (64.6%), Two+ (Hispanic) (18.4%), White (Hispanic) (15.6%), Other (Hispanic) (1.39%), and Black or African American (Non-Hispanic) (0%). Also in Borrego, 96.8% of the residents are reported to be U.S. citizens and none of the households in Borrego reported speaking a non-English language at home as their primary shared language. This does not consider the potential multi-lingual nature of households, but only the primary self-reported language spoken by all members of the household.

In 2022, the median property value in Borrego was $397,000, and the homeownership rate was 78.5%. Most people in Borrego Springs, drove alone to work, and the average commute time was 25.8 minutes. The average car ownership in Borrego Springs, CA was 2 cars per household. In 2022, 70.6% of workers in Borrego Springs, CA drove alone to work, followed by those who worked at home (27.9%) and those who carpooled to work (1.48%). Using averages, employees in Borrego Springs, have a shorter commute time (25.8 minutes) than the normal US worker (26.7 minutes). Additionally, 11.6% of the workforce in Borrego Springs, have "super commutes" in excess of 90 minutes (**Ref. 115 - FIGURE 47**).

An important point in Borrego regarding demographic is that while Census Bureau is legally obligated to keep all individual data confidential there can be mistrust in the community over the

handing over sensitive data that could possibly be misused. Collecting data on immigrants, regardless of their legal status, is legal under US law, and considered necessary for accurate population counts. Census data cannot share it with any other agency, including law enforcement.

However, collecting accurate census data on populations can, however, be problematic for a variety of reasons. There could be individuals or groups of people that are transitory, unemployed and/or retired, have little access to on-line systems, disabilities, criminal histories, language differences, or any number of socioeconomic barriers to participating. Marginalized and/or uncounted people may also include those with partial, pending, or no legal citizen (undocumented immigrant) status. Although the Census Bureau employs various methods to encourage participation among immigrant and non-immigrant populations, including language assistance and outreach programs. While the accuracy and completeness of citizen and noncitizen coverage in U.S. is therefore in question, the following data is the best available data on Borrego Springs, CA (or Borrego Springs or Borrego in this section), from cited sources.

1) Population Demographics

Borrego occupies 42.5 square miles with approximately 58 persons per square mile. Borrego has approximately 8,000 seasonal, snowbird or winter residents (**Ref. 116**). The community is largely populated by retired seniors, many living here on only a seasonal basis, with families deriving their income mainly from service industry jobs including landscaping, pool maintenance, and housekeeping positions (**Ref. 117**).

The estimated full-time population of Borrego Springs is 2,328 (**Ref. 118**). The median age of residents in Borrego Springs is 53.8 years, with almost 60% of the population aged 55-years or older (**Ref. 119**). Residents are primarily White (87%), with the remainder Black/African American, Asian, or two or more races. Approximately 20% of residents identify as Hispanic or Latinx (**Ref. 120**). And based on the seasonality of the area, it is estimated that part-time residents – seasonal workers, “snowbirds,” and weekenders – inflate the population by two-fold (**Ref. 121**).

96.8% of the people living in Borrego are citizens. As of 2022, 23.1% of Borregons were born outside of the country (681 people). In 2022, there were 3.52 times more White (Non-Hispanic) residents (1,900 people) in Borrego Springs, than any other race or ethnicity. There were 541 Two+ (Hispanic) and 460 White (Hispanic) residents, the second and third most common ethnic groups. As of 2022, 96.8% of Borrego Springs, residents were US citizens, which is higher than the national average of 93.5%. In 2021, the percentage of US citizens in Borrego Springs, CA was 95.9%, meaning that the rate of citizenship has been increasing.

In 2022, there were 3.52 times more White (Non-Hispanic) residents (1,900 people) in Borrego Springs, CA than any other race or ethnicity. There were 541 Two+ (Hispanic) and 460 White (Hispanic) residents, the second and third most common ethnic groups. 35.4% of the people in Borrego Springs, CA are Hispanic (1.04k people). As of 2022, 23.1% of Borrego Springs residents (681 people) were born outside of the United States, which is higher than the national average of 13.6%. In 2021, the percentage of foreign-born citizens in Borrego Springs, CA was 22.9%, meaning that the rate has been increasing.

2) Residential and Housing Demographics

Anecdotally, year-round residents are comprised of two types:

- Households consisting of individuals and couples over the age of 55, primarily White/non-Hispanic, who are living on limited or fixed incomes.

- Households comprised of multigenerational families, primarily Hispanic/Latinx and consisting of grandparents, working parents, and children who make up most of the students in the Borrego Unified School District (**Ref. 122**).

Part-time residents are comprised of the following three types:

- Seasonal workers: Individuals who work in the area during agricultural harvest seasons.
- Snowbirds: Those with second homes in the area who avoid Borrego's hotter months, typically arriving in November and leaving in March or April.
- Weekenders: Visitors often interested in outdoor activities ranging from golf to hiking to mountain biking.

The seasonal housing vacancy rate of around 40% (**Ref. 123**). Over 1,000 units are estimated to be for seasonal, recreational, or occasional use. Borrego is largely made up of single-family homes (62.5%), the majority detached, while 24.6% of homes in the area are mobile homes. Duplexes and multifamily units make up the final 12.9% of the housing stock (**Ref. 124 – FIGURE 48**). According to the Borrego Springs Community Plan, over 1,500 homes and condominiums were in the development pipeline in Borrego in 2011. Most of the projects were put on hold due to groundwater supply discussions, while some have had development resume, such as the Rams Hill Golf Course redevelopment.

The larger San Diego County Desert Community Planning Area, which includes the Ocotillo Wells area and expands south encompassing the Anza Borrego State Park, adds an additional 1,000 housing units to the sub-region's total, totaling approximately 3,500-3,700. The San Diego Association of Governments (SANDAG) estimates that more than 10,000 additional acres will be developed as Low-Density Single Family or Single Family by 2050, which would increase the total housing units in the Desert CPA by more than 1,500. This census data is old (2013). Newer housing data has been made available on the County's website including a series of 12 (2020) Borrego Specific housing growth maps developed to support the GP update (**Ref. 125**).

Though sparsely populated, Borrego Springs still has unmet housing and infrastructure needs. The Census estimates that about 76% of renters in Borrego Springs are cost-burdened, and 30.6% of renters are severely cost-burdened (**Ref. 126**). This means almost a third of rental households face monthly housing costs that are 50% or more of their total household income. This generally affects lower-income households, as approximately 95% of renter households making below $50,000 are cost burdened (**Ref. 127**).

3) Income and Poverty

The median property value in Borrego Springs, CA was $397,000 in 2022, which is 1.41 times larger than the national average of $281,900. Between 2021 and 2022 the median property value increased from $339,600 to $397,000, a 16.9% increase. The homeownership rate in Borrego Springs, CA is 78.5%, which is approximately the same as the national average of 64.8%. According to 2016 U.S. Census data, the median household income (MHI) in Borrego Springs is $34,046 (**Ref. 133**). This is almost 50% less than the San Diego County MHI of $66,529 and the California MHI of $63,783. The MHI qualifies Borrego Springs as a Severely Disadvantaged Community (SDAC) as well as an Economically Distressed Area (EDA) according to California Department of Water

Resources guidelines (**Ref. 134**).

With such a large population in retirement, income for many Borrego households comes from retirement, Social Security, or other sources of fixed income. In 2016, there were 1,050 individual Social Security beneficiaries in the 92004 ZIP code – 850 of the total were retired, and 895 were aged 65 or older (**Ref. 135**). The Census estimates 45.2% of households receive Social Security income at an average of $18,201 per year, and 30.3% of households have retirement income at an average of $19,371 per year (**Ref. 136**).

It is estimated that 11.5% of Borrego's full-time residents live below the federal poverty line, the threshold for 2016 being an income of $24,3000 for a four-member household. (**Ref. 137**). Though children under 18 make up only 16% of the total population of Borrego, 60% of youth live in a household that receives food stamps/SNAP, cash assistance, or Social Security Income (**Ref. 138**). Additionally, 71% of children in the Borrego Springs Unified School District (BSUSD) qualify for free lunch, while another 17% qualify for reduced-price lunch under the National School Lunch Program. (**Ref. 139**).

The census tract is also designated as "Low Income, Low Access at 10 miles" to groceries by the USD (**Ref. 140**). A census tract is designated Low Income if the poverty rate is 20% or higher, or if the MHI in the census tract is 80% less than the state or metropolitan area. A census tract is designated Low Access if at least 33% of the population lives farther than 1 mile from the nearest grocery store in an urban area, or farther than 10 miles in a rural area.

The main economic driver is tourism, largely from state park visitation. It is estimated that the 900 square-mile ABDSP attracts between 650,000 and 1,000,000 visitors to the region annually. Recent California State Park Statistical Reports from 2013-2016 put the official numbers between 350,000 to 550,000. In FY2015-2016, there were approximately 403,000 visitors to ABDSP, accounting for $620,169 in total park revenue; meanwhile, Anza-Borrego's 2015-2016 total budgetary expenses added up to over $3.7 million (**Ref. 141**). In 2022, the median household income of the 1.4k households in Borrego Springs, CA declined from $101,458 from the previous year's value of $103,390.

3.23% of the population for whom poverty status is determined (95 out of 2.95k people) live below the poverty line, a number that is lower than the national average of 12.5%. The largest demographic living in poverty are Females 35 - 44, followed by Males 16 - 17 and then Females 18 - 24. The most common racial or ethnic group living below the poverty line in Borrego Springs, CA is White, followed by Hispanic and Black.

4) Community Groups

Borrego Springs has a very extensive and active network of community groups, comprised primarily of year-round residents and part-time "snowbirds." Interests range from outdoor activity and nature clubs to youth and religious groups, volunteer service organizations, and community leadership groups focused on business and governmental affairs.

Two new non-profits, initially formed during the pandemic, have become very active in providing some social services to the community. They are the Community Resource Center and the Borrego Ministers Association. Borrego is so remote that County social service staff only come out once a month, so the community has stepped into the void with donations (used for food and emergency needs such as assistance with rent) and significant volunteer time (for example, there is a weekly food bank at the CRC). Importantly, Hispanic leaders in

the village have also created OLAX – Organizacion de LatinX – a nonprofit to inform and speak for their community as well as stage community events.

Existing Community Groups Current as of February 2025 include:

- Al-Anon, Alcoholic & Narcotics Anonymous
- American Legion Auxiliary
- American Legion Post 853
- Anza Borrego Foundation (ABF)
- Anza-Borrego Desert Natural History Association
- Borrego Art Institute (BAI), Borrego Springs Civic Foundation
- Borrego Ministers Association
- Borrego Spring Art Guild
- Borrego Springs Chamber of Commerce
- Borrego Springs Children's Center
- Borrego Springs Community Sponsor Group
- Borrego Springs Community Resource Center
- Borrego Springs Dark Sky Coalition
- Borrego Springs Little League
- Borrego Springs Ministers Association
- Borrego Springs Performing Arts Center (PAC)
- Borrego Springs Rotary Club/Rotary Foundation
- Borrego Springs Senior Center
- Borrego Springs Youth Basketball League
- Borrego Valley Endowment Fund
- Borrego Valley Stewardship Council
- Borrego Village Association
- Borrego Village Foundation (BVF)
- Boy Scouts & Cub Scouts, Boys & Girls Club of Borrego Springs
- Christmas Circle Community Park
- Feeding America at Borrego Springs Unified School District
- Feeding America at St Richard’s Catholic Church
- Friends of the Borrego Springs Library
- Kiwanis Club
- Lions Club
- OLAX -- Organizacion de LatinX
- S’Interact Club (High School Interact/Rotary plus Soroptimist)
- San Diego County Supervisor Jim Desmond Revitalization Groups:
    - Working Group on Economic Development/Tourism,
    - Revitalization Working Group on Infrastructure,
    - Revitalization Working Group on Community Health,
    - Revitalization Working Group on the Environment
- San Diego Food Bank at Saint Barnabas Episcopal Church
- Soroptimist International of Borrego Springs
- Tubb Canyon Desert Conservancy

5) Industry and Workforce

The economy of Borrego Springs, CA employs 1.19k people. The largest industries in Borrego Springs, CA are Accommodation & Food Services (206 people), Arts, Entertainment, & Recreation (185 people), and Administrative & Support & Waste Management Services (171 people), and the highest paying industries are Professional,

Scientific, & Management, & Administrative & Waste Management Services ($50,869), Retail Trade ($48,245), and Arts, Entertainment, & Recreation ($46,250). From 2021 to 2022, employment in Borrego Springs, CA grew at a rate of 18.9%, from 1k employees to 1.19k employees.

The most common job groups, by number of people living in Borrego Springs, CA, are Sales & Related Occupations (282 people), Building & Grounds Cleaning & Maintenance Occupations (203 people), and Management Occupations (166 people). From 2021 to 2022, employment in Borrego Springs, CA grew at a rate of 18.9%, from 1k employees to 1.19k employees. The industries with the best median earnings for men in 2022 are Professional, Scientific, & Management, & Administrative & Waste Management Services ($40,281) and Arts, Entertainment, & Recreation, & Accommodations & Food Services ($29,801). The industries with the best median earnings for women in 2022 are Arts, Entertainment, & Recreation, & Accommodations & Food Services ($14,177).

The most common employment sectors for those who live in Borrego are Accommodation & Food Services (206 people), Arts, Entertainment, & Recreation (185 people), and Administrative & Support & Waste Management Services (171 people) although some residents may live outside of Borrego Springs, CA but work there, or visa-versa.

While Anza-Borrego Desert State Park is the largest draw to the Borrego area, visitors are often interested in other activities such as biking, hiking, golfing, stargazing, or visiting the Borrego Art Institute and local galleries. The surrounding businesses in Borrego, such as restaurants, retail stores, and lodging properties, also support this tourism economy. There are 10 lodging options for visitors to Borrego, with additional communities and resorts offering traditional house rentals or RV parking, as well as multiple private vacation home listings for the greater Borrego Springs area.

It is important to note that most of the business in Borrego is seasonal, with the high season from October to May, although the village is still active during the summer months. Since 2009, the Borrego Village Association has been working on a variety of community initiatives to make Borrego's Central Business District more accessible and pedestrian-friendly through design enhancements and traffic-calming. This central area of the village provides much of the support for the tourism economy and hosts many of the local businesses serving the community. In the winter of 2024-25, the County Department of Public Works did extensive work to make the central business district more pedestrian-friendly, completing sidewalks on two roads, calming traffic around Christmas Circle (which is the main community gathering place), and creating very visible crosswalks to the Circle.

There are an estimated 1,000 residents (around 50% of residents aged 16 years or older) in the labor force in Borrego Springs.22 Workers are primarily employed in natural resources, construction, and maintenance occupations, as well as educational services, healthcare, and social assistance. Borrego Springs' 2015 Work Area Profile24 indicates that just over one-third of workers earned $1,250 per month or less, one-third earned $1,251 to $3,333 per month, and a third earned more than that. The workforce is majority female (60%) and 37.5% are Hispanic/Latinx.

Unemployment data, excluding retired workers, students, active-duty military, stay-at-home parents, and those completing unpaid volunteer work, etc., indicates that almost 20% of the civilian labor force in Borrego Springs is unemployed, compared to 7.8% of the population in

San Diego County and 7.4% of the population nationally. This unemployment rate within the census tract is higher than 99% of the rest of the state (**Ref. 142**).

However, this higher rate could be inflated due to a factor other than a lack of job opportunities in the area, such as the informal or "underground" sector of the local economy (**Ref. 143**). The informal sector is defined as a part of the economy that is unregulated, unrecorded, and/or untaxed by the government. Common examples of informal employment include paid domestic workers, day laborers, or other types of employees (**Ref. 144**). The Census estimates that there were 147 self-employed workers (in non-incorporated businesses) and unpaid family workers in Borrego Springs in 2016 (**Ref. 145**).

According to the San Diego North Economic Development Council (SDNEDC), two sub-regions, the Northern Coast, and Inland North County (where Borrego is located), have lower than average educational attainment and lower than average wages (**Ref. 146**). A result of this disparate growth, SDNEDC suggests targeted workforce development to connect residents in less dynamic regions to high-skill, high-growth career pathways to distribute opportunity more evenly across the North County.

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6) Farming

Borrego Valley has long been attractive to the agricultural industry. Early interests brought the growing of cotton, gladiolas, alfalfa, and grapes to the Valley. By the mid-1960s the primary crops turned to grapefruit and lemons, then later in the 1970s evolved to landscape species such as palm and olive. The climate of the desert, along with very inexpensive land and the perception of readily accessible ground water caused the agricultural ventures in Borrego Valley to grow and sometimes prosper.

Approximately 4,000 acres in the northern part of Borrego Valley have been converted to the growing of grapefruit, grapes, palm trees and lemons since the 1940s. The groundwater pumping for intensive agriculture has drawn the water table down at an average rate of about two feet per year for about sixty years, causing the pumping to become all the more expensive and the quality of the water to become more problematic as the well depth increases and the use of fertilizers and pesticides is prolonged.

Today, in spite of the arid desert climate and the declining water supply, agriculture still uses the most water but employs just a handful of local residents. Borrego's agricultural products, by and large, are not consumed locally, and most farm owners actually live outside the Valley. There are approximately 4,000 agricultural acres in the north end of the Valley, about half planted in citrus, largely exported. Landscape ornamentals, palm trees and other nursery products are grown on about 900 acres and shipped to national and international destinations as well.

7) Tourism

One of the community's main economic drivers is tourism—welcoming the estimated 650,000 to 1,000,000 annual visitors to the Anza-Borrego Desert State Park. Anza-Borrego Desert State Park is one of the strongest economic engines in the region. Visitors to the Anza-Borrego Desert State Park account for over $40 million in annual revenue to the region each year.

The Park maintains an award-winning Visitor Center at the western edge of town. Park and Chamber of Commerce representatives are collaborating closely to more effectively market and promote the area, and the Chamber of Commerce has recently launched a new destination-marketing program, Tourism Borrego, to support those efforts.

Tourism supports nine lodging properties, about a dozen restaurants, and more than two-dozen retail establishments. Two thriving non-profit educational membership organizations offer a large number of programs for locals and visitors—the Anza-Borrego Foundation & Institute (ABFI) and the Anza-Borrego Desert Natural History Association (ABDNHA). These organizations and their programs attract members and financial support from people all over the world (**Ref. 151**).

Several nine and 18-hole golf courses are open to the public: Road Runner Club (9), The Springs (18), Club Circle (9) and Borrego Springs Resort (18). Private golf courses include De Anza Country Club (18) and Montesoro (Ram's Hill) (18 x 2 courses). Some of these developments have exercise rooms and tennis courts open to guests, residents or on a monthly or annual membership basis. There is one commercial horseback riding facility. There is a private commercial desert tour company operating in Borrego Springs, which has a concession contract to operate within the State Park. Otherwise, there are no commercial recreation facilities, including movie theater, bowling alley, bike rental, jeep rental, mini-golf, water park or gym/weight room open on a drop-in basis without membership.

Industrial land uses in Borrego Springs are limited to light impact jobs-based businesses that are largely service-related in nature. These businesses are generally located along Stirrup Road. Secondly, service-related business are located in the proximity of the airport east of the town center and tend to be of greater land use impact, such as the concrete plant and construction yards. The community supports many professional and trade services, and local Chamber of Commerce has 225 members. The Performing Arts Center and the Borrego Art Institute provide cultural programs for residents and tourists. Beside small businesses, other employers include the San Diego County Road Sub-station, the Borrego Springs Unified School District, and the Anza-Borrego Desert State Park.

8) Socioeconomics Analysis and Solutions:

Every drop of water is now allocated through the judgement outlined in the 2020 GMP. Analysis performed to determine an adjusted housing capacity of 7,651 importantly, done not factor in the need to include the mandated drawdown of the aquifer use to the sustainable yield by 2040 of approximately 5,000 - 8,000 AF/year. While we note that the sustainable yield is reassessed in Watermaster Reports every five years and will fluctuate, limitations on water must be carefully analyzed and included specifically into any adjusted housing capacity.

At the state level, California Assembly Bill 10 is meant to address the housing crisis in CA, requiring each community in the state to meet construction/supply quotas of affordable housing. In future GP iterations, the County will be required to include a "Vehicle Miles Traveled" (VMT) analysis in lieu of the current Level of Service (LOS) traffic analysis included in the 2010 County General Plan. VTM replaced LOS in CEQA to consider actual transportation-related environmental impacts of any given project (**Ref. 128**). Although passed in 2013, under SB 743, to address Green House Gases tied to vehicle exhaust emissions affecting climate change, it did not go into effect until July 1, 2020. In the interim, (2020 to quasi-current) the County has made various decisions regarding VTM, from using the existing General Plan with a 15163 Consistency Analysis under CEQA, to updating its Transportation Study Guidelines (**Ref. 129**).

The County updated its TSG from a prior 2020 version however, which did include VMT analysis requirements but only for the County's unincorporated areas. Subsequently, the County, was sued by The Cleveland National Forest Foundation for not including the entire County in the requirements (**Ref. 130**).

The County BOS voted 4:1 to include the County in its entirety in its final 2022 TSG. Despite the GP consistent, 15163 CEQA Exemption, Consistency Analysis approach, the County thus addresses VMT in using a decision tree from the TSG (**Ref. 131**).

Despite the uncertainty that occurred with the County's compliance with state mandated VMT law, the whole process led to the County's increased commitment to address climate and environmental shortfalls and led directly to its decision to develop the SLUF. Importantly,

the SLUF will be used to augment future General Plan Updates particularly for the unincorporated areas (**Ref. 132**).

H. PUBLIC FACILITIES

1) Public Health

96.6% of the population of Borrego Springs, CA has health coverage, with 35.5% on employee plans, 14.3% on Medicaid, 34.2% on Medicare, 9.71% on non-group plans, and 2.89% on
military or VA plans. Between 2021 and 2022, the percent of uninsured citizens in Borrego Springs, CA declined by 27.4% from 4.68% to 3.4%.

Borrego Springs is located within a Medically Underserved Area (MUA) in San Diego County, as defined by the federal Health Resources and Services Administration. An MUA is an area with too few primary care providers, high poverty rates, a higher older adult population, and/or a high infant mortality rate. (**Ref. 152**). There is one medical clinic that provides comprehensive healthcare for residents in the Borrego Valley – the Borrego Valley Medical Center, which does not provide emergency services. Desert Home Care provides in-home care and Mountain view Assisted Living is an assisted-living facility in the area.

Borrego's location within the desert of San Diego County poses increased risk for heat-related illnesses. There is also a significant number of sub-populations with greater heat-related risk factors: those 65 years or older, those who are medically underserved and/or low-income, as well as those who are occupationally or recreationally active outdoors (**Ref. 153**). However, since 2014, thanks to the development of one of the largest utilities microgrids in the United States, Borrego Springs and the surrounding northeast area of the county are less likely to have extended power outages that risk residents being without air conditioning (**Ref. 154**). In addition to heat risks, the census tract is also ranked higher than 75% of other state tracts for the number and type of groundwater threats that exist in the area due to contamination (**Ref. 155**).

About 12% of residents in the 92004 ZIP code in 2014 had ever been diagnosed with asthma. This is slightly lower than the statewide rate of 14% and the countywide rate of 16% (1-17 years) and 14% (18- plus years) (**Ref. 156**). However, changes in climate or land use could affect these rates, as the neighboring Salton Sea area has seen a spike in asthma issues due to drought and receding water (**Ref. 157**).

2) Parks and Recreation

Borrego has several community facilities and is also located near multiple public recreation areas. The Borrego Springs Performing Arts Center presents multiple plays and musicals in season and the Community Concert Association also provides regular programming. The Borrego Springs Community Park offers pickleball courts, a dog park, a picnic area, and an astronomy bowl. Cuyamaca Rancho State Park, Palomar Mountain State Park, and Anza-Borrego Desert State Park are nearby, as is Ocotillo Wells Off-Highway Motor Vehicle Recreation, San Bernardino National Forest, Mt. San Jacinto, Joshua Tree National Park, and the Salton Sea.

The Anza-Borrego Desert State Park headquarters provides visitor facilities that are also used by residents, including a Visitor Center, developed campgrounds, trails, and an outdoor amphitheater. It provides a number of pleasant, age-and environment-appropriate

recreation facilities at the Borrego Springs Children's Center, a licensed childcare and learning center, the Borrego Springs Elementary School, and Greater San Diego County Boys' and Girls' Club. The middle and High Schools have a "half-Olympic size" pool, plus a track and a football field open for public use after school and on weekends. It also has a two-field Little League complex. Many of these facilities were funded and built by private philanthropic citizens or community organizations.

Christmas Circle Park (maintained and managed by the non-profit Christmas Circle Association) sits at the nexus of major access roads, S-22, and S-3. It has the only easily accessible public restroom facilities, recently upgraded to meet Americans with Disabilities Act (ADA) requirements. Christmas Circle is the focal point for many community gatherings, activities, and events, including Borrego Days Desert Festival, the Circle of Art, and the weekly Farmer's Market. The County has allotted Community Enhancement Funds (CEF) for park improvements and maintenance.

In May 2000, San Diego County purchased a 16-acre parcel along Church Lane and Country Club designated for a Community Park. However, this park has not been developed because there is no local entity responsible for Parks & Recreation, and no agency, funding, or people to manage maintenance and operations for a park of this size. Borrego has an integrated equestrian/pedestrian trail system, the Community Trail System that links with the federally designated Sea-to-Sea, California Riding and Hiking Trail, and the Pacific Crest Trail. There is no community memorial park or cemetery.

3) Existing Circulation and Mobility

The original plan to provide access to Christmas Circle and the Borrego valley from Los Angeles and the coastal population centers to the west was via Coyote Canyon. When this access was blocked by state park concerns, the present road was cut into the side of the mountain down Montezuma Grade to access Christmas Circle via Sunset Road. This plan also failed because the lower section of the road had to be relocated, and the present alignment was realized down

Where Sunset Road was to be the main access road to the Circle, Palm Canyon Drive now took on that role providing access to the heart of the community in its present configuration. There are well-established neighborhoods developed off major corridors (S-22 and S-3) many dating from the 1950s: Sun Gold, Ocotillo Heights, de Anza Country Club, Club Circle, Verbena, Deep Well and Montesoro (Ram's Hill). The primary commercial and tourist-serving corridor is S- 22, Palm Canyon Drive, with a central business district comprising a one-mile stretch from Stirrup Road westward to Country Club Road. Tourist-serving and other businesses are located primarily west of Christmas Circle and in The Center and The Mall. Highway S-22, Palm Canyon drive, is the main thoroughfare through the center of Borrego, and links to State Route 79 to the west and Salton City and Route 86 to the east. Highway S-3 links Borrego to State Route 78, which connects to Julian and Ramona to the west, and Brawley to the east.

Christmas Circle was envisioned by town fathers to be a vibrant town center with a large three- acre park dedicated to the then operational Community Association in the model of the traditional town square. It followed in the vision of the New Town movement of the first half of the century with roads radiating out from the "garden" center and with "grand avenues and boulevards" reaching out to designated activity centers throughout the valley which

were to become Rams Hill (Montesoro), the Borrego Springs Resort and Country Club and the DeAnza Country Club.

It was designed in the shape of a circle as were the Hispanic town centers or the 'Zocalos' in Mexican villages to the south. Land uses around the center were to be crafted in the model of Scottsdale with a vision for shops on small lots being patronized by seasonal visitors filling their shopping bags with gifts for Christmas, which is the start of the high winter season.

Christmas Circle is located at the central crossroads of Palm Canyon Drive and Borrego Springs Road. It combines a community park, a traffic control device and surrounding retail commercial parcels. Originally conceived by its planners to serve as the town center, it remains largely undeveloped except for the community park.

In the 50 years since its initial planning, changing public tastes and governmental standards for hydrology, flood control, public health, road design and parking have made the current Christmas Circle area poorly suited to current and future community needs. Christmas Circle was to be anchored in the model of the 1950's shopping center design with the grocery store, the bank, the newspaper and whatever else could be garnered to support the Circle with respectable businesses all facing the park. The major streets intersecting the park were traffic controllers, but the minor streets were designated as pedestrian shopping streets for the convenience of the general population purchasing items of perhaps other than essential needs in the support of tourism.

In desert country, the resources of quiet, uninterrupted vistas and brilliant night skies are the signature of healthy communities and landscapes. Disturbance of the skyline, silhouettes of towers, powerlines, telephone poles, "cut and fill" road scars, "security" lights, agricultural burning, and dust from off-highway vehicles during busy holidays are all impacts to the scenic quality of Borrego Valley and the surrounding State Park.

State Highway 78 and County Highways S3 and S22 serve the residents. The closest airport is Borrego Valley Airport. The closest international airport is Palm Springs International Airport, approximately 80 miles north of Borrego Springs. Public transit is available by Metropolitan Transit System (MTS), which provides transportation service via routes 891 and 892 but only on Thursdays and Fridays.

A County-approved "Back Country Rural Area" transportation map exists for Borrego Springs, supported by the Community Sponsor Group. Transportation systems include state highways, city streets, horse trails and footpaths throughout the community. The widely dispersed nature of the community means we are "car oriented." Rural bus service to surrounding areas has been significantly reduced. Since the post office does not provide residential mail delivery, residents must drive to pick up and deliver mail. The medical center provides limited transportation shuttles from downtown to its facilities at Montesoro, 6.5 miles away. Without a network of sidewalks or covered walkways, hot weather walking in the downtown area is impractical, at best.

A significant concern is the deteriorating condition of internal and connector roadways. Maintenance methods (patching) are inadequate, and asphalt additives leach out in the warm environment causing roads to break apart and creating potholes. Locals have an average commute time of 25.8 minutes, and they drove alone to work. Car ownership is approximately the same as the national average, with an average of 2 cars per household.

4) Existing Community Facilities and Infrastructure

Due to the large size of the state park, it is about an hour's drive in any direction to get to the nearest communities to assess full services and commerce variety (i.e., 24/7, advanced, and specialty health care options and centers; large supermarkets and discount stores; gyms, auto dealers, or movie theaters). Health care and pharmacy services are limited, especially on weekends. CalFire provides EMT and ambulance services, and Mercy Air, contracted by the Borrego Valley Endowment Fund, provide no-cost emergency helicopter flights to regional hospitals for both permanent and seasonal residents of the village. Borregons, must drive east then north to the Coachella Valley, south to Brawley and El Centro, or west to Julian, San Diego, or Temecula.

The community is supported by the following facilities and infrastructure:

County Road Station
School District (High School is Red Cross Emergency Evacuation Center)
Water District
Fire Department
Sheriff's Sub-station
County Library
Children's Center
Boys' and Girls' Club
Senior Center
Medical Center
Airport
County Rural Bus System
AT&T Central Office
Chamber of Commerce

The Anza-Borrego Desert State Park headquarters provides visitor facilities that are also used by residents, including a Visitor Center, developed campground, trails and outdoor amphitheater.

5. School Service

The Borrego Unified School District (BSUSD) serves grades K-12 who attend five schools. The school district includes Ocotillo Wells and serves discretionary students from Ranchita and Salton City. Borrego Unified School District, with offices on the High School campus, serves grades K-12 (currently 450 students) who attend five schools. School District includes Ocotillo Wells and serves discretionary students from Ranchita and Salton City. A new charter school was recently approved by the Borrego Unified School District (BSUSD) Board of Trustees, which consists of five elected members.

6. Utilities

Electrical service in Borrego Springs is provided by San Diego Gas and Electric (SDG&E). Service reliability from SDG&E is poor, especially during summer 'monsoon' season. Above-ground utility poles are susceptible to damage in frequent high winds, often disrupting service during storms. With high summer temperatures (averaging 107 degrees), costly electric bills for residents and businesses affect the ability to conduct year-round commerce, resulting in fewer services and lessened ability to market the community for year-round tourism. Propane service providers to Borrego Springs are Amerigas and Pro-Flame Gas Co. Increasingly, residents are installing private solar generation systems.

7. Sewer and Water

Borrego Springs receives sewer and water service from the Borrego Water District (BWD), established in 1962. In December 1979, the latent powers of the District were activated by the San Diego Local Agency Formation Commission to provide water and sewer services to Montesoro (formerly Rams Hill). Since 1979, the BWD has consolidated water and sewer services within the community.

Sewer service uses existing treatment facilities located in the southeastern area of the Valley adjacent to the Borrego Sink. Service is provided via a collection system extending from the treatment plant approximately 7.2 miles north along Borrego Valley Road, and west along Palm Canyon Drive to Montezuma Valley Road. The Borrego Water District also maintains pest control and flood control powers.

The Water District has 2,100 water customers and 800 sewer customers. Since most of the houses are not occupied all year round only one-third of the sewage is created from year-round residents. Many individual house owners have elected for septic tanks, which lower sewage flow due to fewer customers.

8. Energy - Microgrid

The local Microgrid (completed in 2013 by SDG&E) is the first utility-owned, community scale microgrid in America to demonstrate the capabilities of renewable generation and new technologies to enhance energy reliability. Microgrids that use renewable energy and battery storage can increase energy resilience. The Borrego Springs Microgrid is designed to be a robust, renewable-based system that provides critical power during emergencies and planned outages, which are necessary when system upgrades and maintenance work are needed. The Borrego Springs Microgrid is also a true community microgrid providing benefits to the entire area, and not just to single-metered customers. A utility-grade microgrid controller known as the Distributed Energy Resources Management System (DERMS) monitors all assets deployed across Borrego Springs including the distributed battery storage and the solar plant located at the northern edge of town.

When an outage occurs, the Microgrid can be activated to provide power. During the day, the Microgrid can harness energy from a local solar plant as well as the Microgrid's batteries and generators to power the entire community. During the night, the Microgrid's batteries and generators power designated critical-load areas. As needed, non-critical loads are shed to maintain Microgrid stability. Seamless transitions to and from the grid are possible and can be initiated and controlled onsite or remotely.

9) Distribution Communications Reliability Improvement (DCRI) Project

The Distribution Communications Reliability Improvement (DCRI) project will provide more reliable, high-speed communications to help protect communities from wildfires by expanding the use of the Falling Conductor Protection (FCP) technology. FCP uses relays that communicate wirelessly to de-energize downed power lines (typically due to high winds) before contacting the ground, potentially sparking fire.

SDG&E plans to use its new advanced wireless communications network to monitor, communicate with, and control transmission and distribution equipment. They will be able to support additional smart grid functionality such as microgrids, advanced battery storage,

dynamic voltage controllers, falling conductor applications, high-risk fire mitigation and photovoltaic penetration volatility.

SDG&E uses wireless networks to communicate between FCP and other devices. DCRI will replace these systems with a single wireless network serving various purposes, like FCP enabling push-to-talk radio for crews and the ability to monitor and control the power grid DCRI is part of a comprehensive 3-pronged program to minimize the risk of wildfire. First, SDGE engineers operate the electric system to be fire safe. Second, they have weather models and over 150 weather sensors to predict and monitor fire conditions. Lastly, SDGE has been educating residents in High Fire Threat Districts to be safe and prepared for wildfires.

10) Telecommunications

The local telephone company is AT&T. Only Borrego Valley businesses and residents living near Palm Canyon Drive are able to obtain high-speed data (T-1 and DSL) service. Residents living more than 10,000 feet from the central office must use dial-up or cable Internet service.

The local franchised cable provider is CableUSA, providing television and high-speed Internet service. There are several Internet service providers that provide toll-free local access to their dial-up networks. Footnote 50 Most residents now use only cell phone service, not landlines. This means that free directory lookup for someone's phone number is difficult to impossible. A local non- profit has for years published a directory available at a minimal price, but most Spanish speakers do not participate in it.

11) Trash Collection / Dump / Landfill

Trash collection for Borrego Springs is provided by CRR Waste Services research and update Allied Waste Services out of Imperial County. They provide customers with trash and recycle containers and make weekly pickups. Allied Waste Services also operates the local landfill at 2449 Palm Canyon Drive.

The local landfill is owned and operated by Allied Waste and their subsidiary, San Diego Landfill Operators. It currently uses 19 acres of a 40-acre site and is operating under a 1973 permit from San Diego County allowing the landfill a cap at 50 tons of garbage per day. Occasionally in the wintertime they will reach the cap and have to close for the day. The landfill can accept garbage from many regional communities, and some of the Borrego Valley residential garbage is transported to El Centro for dumping. There are no current plans for expansion of the active 50 County of San Diego General Plan and Borrego Springs Community Plan. Retrieved from landfill area.

12) Airport

The Borrego Valley Airport, three miles to the east of the Village Core, is an ideal area for future commercial and research park development. There is no development surrounding the airport now, permitting a re-thinking of uses in the area. There is a large quantity of disturbed habitat land in the area left over from prior, now-defunct uses.

The Airport Influence Area (AIA) for Borrego Valley Airport affects the Borrego Springs Community. The AIA is comprised of the noise contours, safety zones, airspace protection surfaces and overflight areas for Borrego Valley and serves as the planning boundaries for the Airport Land Use Compatibility Plan (ALUCP). The Airport Land Use Commission for

San Diego County adopted the Airport Land Use Compatibility Plan to establish land use compatibility policies and development criteria for new development within an AIA to protect the airport from incompatible land uses and provide the County with development criteria that will allow for the orderly growth of the area surrounding the airport. The policies and criteria contained in the ALUCP are addressed in the General Plan.

13) Fire Protection

The Borrego Springs Fire Protection District, formed in 1961 and was replaced by CalFire in 2023. The transition eliminated the special district tax on real property in Borrego and property owners now pay the same tax as all San Diego County residents. CalFire provides fire protection, emergency medical services, Community Emergency Response Team (CERT) trainings, fuel reduction projects, and fire prevention efforts.

The transition to CalFire resulted in more firefighters and paramedics, updated equipment, improved safety and well-being for residents, and protection of property and resources. CalFire provides structural and groundcover fire protection and rescue services for approximately 300-square miles and about 2,500 residents. The District operates one fire station staffed by professional, full-time firefighters and trained emergency medical technicians (EMT) and paramedics. Its equipment consists of three fire engines, one hazardous material trailer, and three ambulances. All ambulance personnel are either County-certified EMT 1As or paramedics. The Fire Department responds to approximately 390 calls per year. Another fire station is under consideration by the Borrego Springs Fire Department for the purpose of bringing the Montesoro and other developments into compliance with the five- minute travel time requirement for development with densities greater than Village Residential 2.

14) Law Enforcement

The San Diego County Sheriff's Department and the California Highway Patrol provide police protection in Borrego Springs. Currently there are two resident Highway Patrol officers and three County Sheriff deputies. Ten Anza-Borrego Desert State Park rangers also maintain peace officer powers and provide additional protection. The Park also maintains a patrol plane and an assigned Pilot Ranger. Borrego Springs has the lowest crime rate in the Rural Law Enforcement sector of San Diego County.

I. PLANNING SETTING PROPOSED SOLUTIONS AND RECOMMENDATIONS:

Planning for and Implementing a Resilient Watershed-Scale Master Plan in the near future is expected to address:

- Strengthen governance and community engagement to enable long-term resiliency.
- Continue to support sustainable agriculture and ecological restoration of fallowed lands.
- Expanding local renewable energy infrastructure will reduce dependency on external power grids.
- Legal status, ownership, management, and other legal parameters of the RCA areas should be clarified in future iterations of the BSCP Community Plan and County General Plan/related policy and guideline documents (such as the BMO and MSCP) Opportunity to further enhance the existing local microgrid with battery and hydrogen storage and further

increase access and use of independent and/or dispersed energy resources increase public health and safety during County heat or fire events.

- Take the opportunity to develop community guidelines which include sustainable desert design themes throughout the Community
  - feature energy efficient, accessible, nature oriented and nature based solution designs to harmonize with the natural environment (i.e., exteriors with earth tones;
  - use permeable light-colored surfaces such as decomposed granite; non-invasive low water use native plants; wildlife sensitive permeable landscapes and buffers with full cut off and/or movement activated light fixtures; open fences made from natural materials, (**Ref. 158**)
  - develop enhanced wayfinding which highlights the communities natural features and ways to enhance or leave no impact when visiting.
- Work with the County on a Clear housing potential base taking into consideration all the developing and existing climate initiatives.
- Items 7 and 11 of the BMO allow too much grading of areas that could retain soil retaining species, work on amending for Borrego with a Special Study Area, etc.
- Define if BWD Profile of the District from Audit Report 2025, is a 5-year report or annual report? If so, please be consistent with nomenclature per the GMD work plan for clarity in the community on work products and discussions.
- Borrego is a strong contender as a world class ecotourism destination; however, Increasing threats from recreational use, not only from wayward hikers but the increasing proliferation of e-bikes and other silent vehicle devices that can easily reach previously inaccessible areas (including resting and nursery sites for animals and their young); must be assessed. Work on related planning documents and opportunities (i.e., with State Parks) to explain any seasonal or current rules, policies, and regulations. In this same vein, provide accessible access tools such as sand wheelchairs and regular guided excursion where situational control and education can occur.
- Be Proactive rather than Reactive when engaging in the Planning Process
- Assess proximity of BLM lands and engage in the new Desert Regional Energy Conservation Plan (DRECP), BLM Land Use Planning Amendment (LUPA) to determine impact any proposed energy projects on BLM land will affect Borrego (**Ref. 159**).
- Determine how to save sensitive species including big horned sheep and species associated with GDE in the interim between current water use and sustainable yield water use in 2040
  - Define how are big horned sheep are classed in the context of GDE
  - Define if GDE is only used for plants?
  - Continue BHS watering and expand to help other specific species and ecosystems such as mesquite bosque (**Ref. 160**).

6. BASIN SWOT ANALYSIS

This White Paper of Borrego Spring's Groundwater Subbasin Characterization, its companion appendices, and other "Deliverables" for the grant, are under: "Component 5 - Resiliency Strategy, Category (b): Environmental / Engineering/Design Task 2: Basin Characterization" which mandates Task 2: Basin Characterization (see Ref 29 Figure 9 below) to: "Compile and summarize research in collaboration with the region's experts (including, but not limited to, UC Irvine Anza-Borrego Desert Research Center researchers, Anza-Borrego Desert State Park environmental scientists, and Borrego Water District (BWD) in natural resources / environmental characteristics, planning, and governance to inform the community visioning process and the development of community priorities for the basin under Task 5. Identify and prioritize basin issues and opportunities, which will include potential basin restoration or management projects. Obtain feedback on summary white paper from a minimum of 5 water network partners and/or cooperators. Perform a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of the natural resources within the basin."

The SGMA Grant Component 5 Task to requires the following:

"Identify and prioritize basin issues and opportunities, which will include potential basin restoration or management projects."

Basin Comments, Issues, Opportunities, and Suggestions found during the White Paper research include the following:

1. The GSP and GMP were reviewed and exhaustive literature research was conducted which included accessing and assessing draft documents for Grant Component 6 (Restoration of Fallowed Lands) and Component 8 (Assessing Groundwater Dependent Ecosystems)
2. It is recommended that annual or future surveys be included for the GMP program to access the results of the SGMA grant and the program GMP itself.

Identified Strengths of the GMP included the following:

- Overall Aquifer Management
- Recent replacement of dry season wildlife guzzlers (November 2023) to augment water supply and enhance climate change resilience
- Natural aquifer recharges from rainfall
- New Groundwater Management Plan (GMP) includes comprehensive assessment of water use through baseline data compilation, and new continuous monitoring

Identified Strengths of BWD and GMP Stormwater & Wastewater Management

- Implementation of GMP Task 2 to track and assess potential impacts on water quality
- GMP Task 2.1 addresses pollution burden assessment, including analysis of baseline air quality conditions
- 2011 Borrego Springs Community Plan (BSCP) includes goals for wastewater effluent reuse
- BWD via GMP (2020) commitment to track and assess wastewater systems and explore gray water reuse opportunities

Identified Weaknesses of BWD and GMP Stormwater & Wastewater Management

Infrastructure

- Limited stormwaters capture systems

- Restricted municipal sewer service coverage (only 800 units out of 2500 connected)
- Current GMP lacks comprehensive assessment of roadway chemicals, golf courses, and other commercial ventures

Water Management

- Insufficient wastewater system coverage
- Limited water recycling opportunities due to restricted sewer connections

Identified Opportunities of BWD and GMP Stormwater & Wastewater Management

Policy & Infrastructure

- Enhanced enforcement of Low Impact Development (LID) and Best Management Practice (BMP) guidelines
- Potential expansion of municipal sewer connections
- Optimization of wastewater treatment and recycled water infrastructure placement to protect sensitive areas
- Implementation of monthly or weather-informed street sweeping programs
- Education and Outreach for Community on BMP, use of low water, organic, and integrated pest management outdoor area controls

Water Quality

- Increased water quality and quantity through BSCP updates
- Potential for expanded wastewater reuse in open spaces and golf courses

Threats

Environmental

- Aquifer over drafting leading to decline of unique biomes (Mesquite and Ocotillo forests)
- Impact on sensitive species (bighorn sheep) due to water scarcity and climate change
- Groundwater contamination risks from:
  - Existing and proposed septic tanks
  - Agricultural runoff
  - Yard maintenance chemical runoff
  - Untrained pest control application

Water Quality

- Potential degradation of aquifer water quality from increased recycled wastewater use
- Risk of salt, mineral, and chemical buildup in areas using recycled wastewater
- Persistent issues with untrained pest control applicators in various settings

7. CONCLUSION

This paper satisfies SGMA Grant Component 5, Task 2 directives to “Compile and summarize research in collaboration with the region’s experts including, but not limited to, UC Irvine Anza-Borrego Desert Research Center researchers, ABDSP environmental scientists, and BWD in natural resources / environmental characteristics, planning, and governance to inform the community visioning process and the development of community priorities for the basin.” It also states to, “Identify and prioritize basin issues and opportunities, which will include potential basin restoration or management projects.” This paper provides “Documentation of basin monitoring and evaluation roles, responsibilities, and decision-making protocols from authorities such as BWD, the GMP, technical consultants to parties in the basin, and other key federal, state, and San Diego County entities.”

Borrego Springs continues to be an engaged leader in community ecological awareness and conservation and has been working hard to address critical challenges related to water scarcity and sustainability, climate change, and infrastructure resilience. With on-going strategic planning, sustainable development innovation, and community engagement, it will remain a role model of success for other arid regions facing similar challenges. To support Borrego’s continued viability well into the future, this white paper tiers off prior progressive planning efforts and aims to provide an updated roadmap for a new, resilient, watershed integrated, science-driven, and community-supported Borrego Springs Community Plan.

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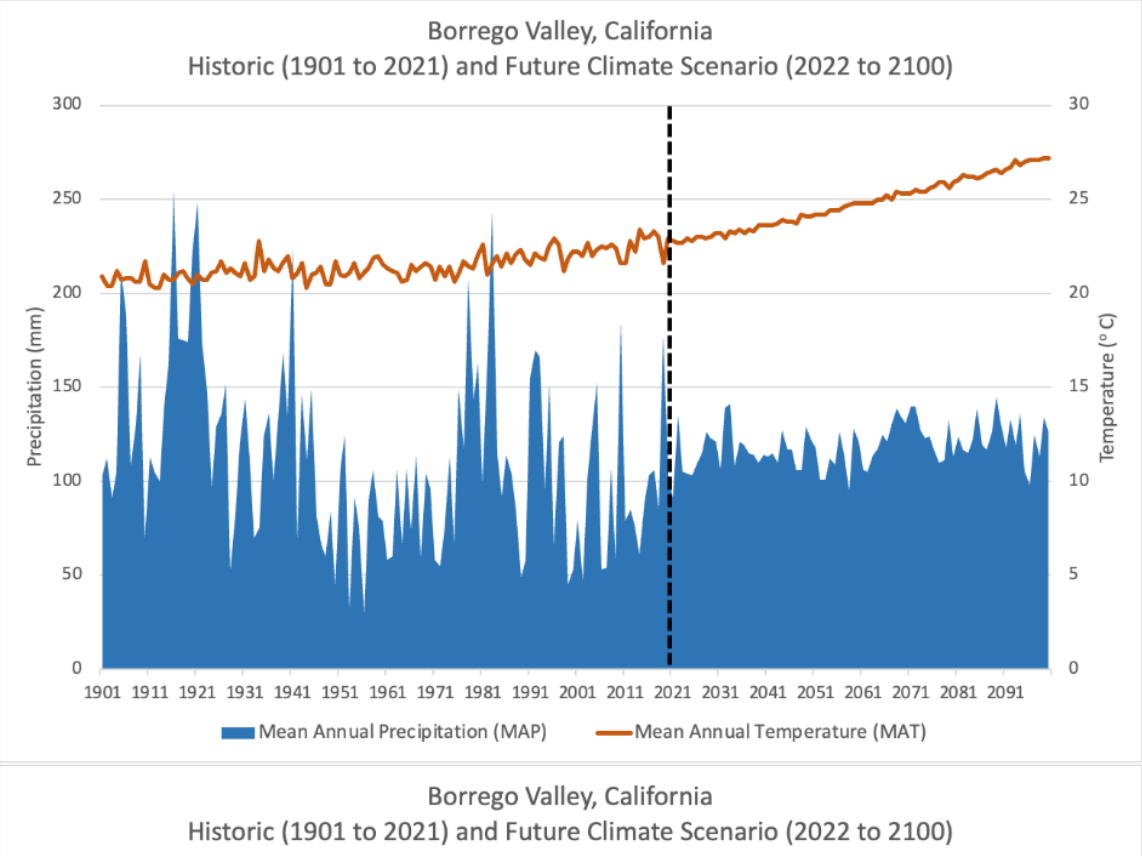
TOWARDS A RESILIENT, INTEGRATED WATERSHED SCALE MASTER COMMUNITY PLAN AND COMMUNITY
MARCH 2025

ATTACHMENT 2: LIST OF FIGURES

Rehabilitation of Fallowed Farmlands in Borrego Valley—Literature Review



Borrego Valley, California
Historic (1901 to 2021) and Future Climate Scenario (2022 to 2100)

FIGURE1A . HISTORIC AND FUTURE CLIMATE SCENARIO WITH TEMPERATURES FLATTENING OUT AT A HIGHER AVERAGE LEVEL, Source: Rehabilitation of Fallowed Farmlands in Borrego Valley—Literature Review (Land IQ, UCI March 2023)

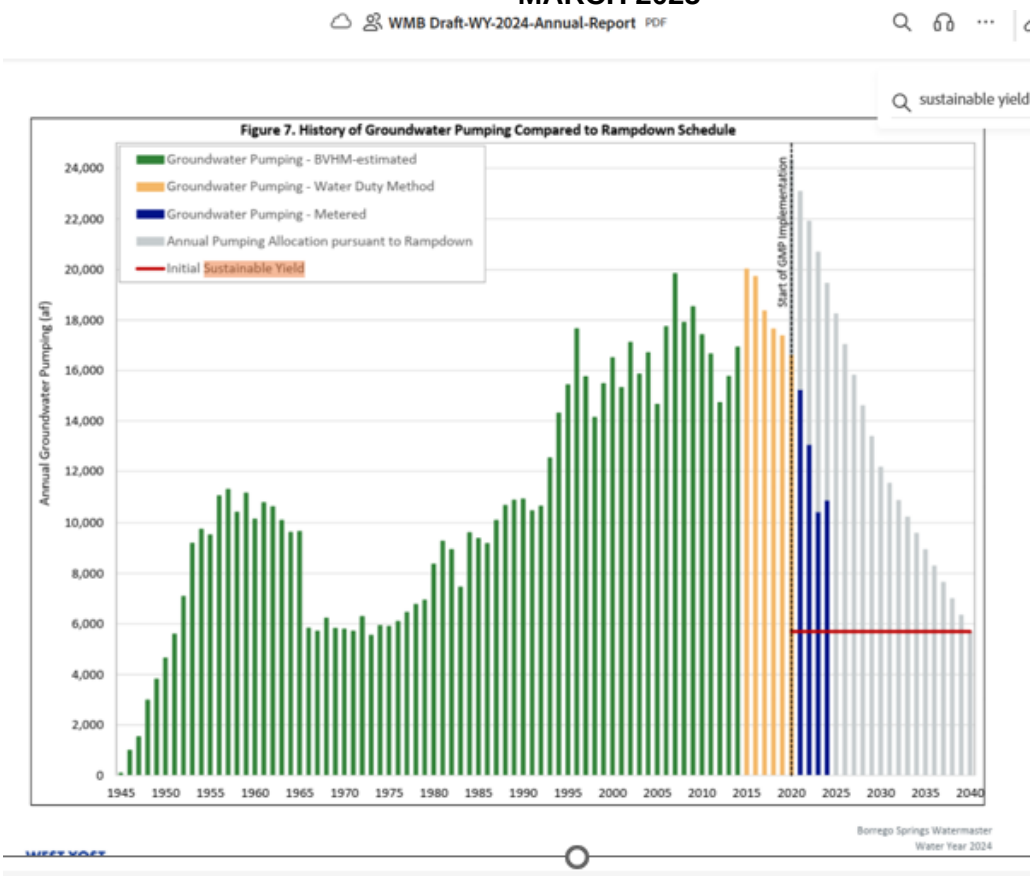


FIGURE 1B: BORREGO SPRINGS WATERMASTER OVERDRAFT CHART HISTORY WITH SUSTAINABLE USE BRIGHTLINE, https://borregospringswatermaster.com/

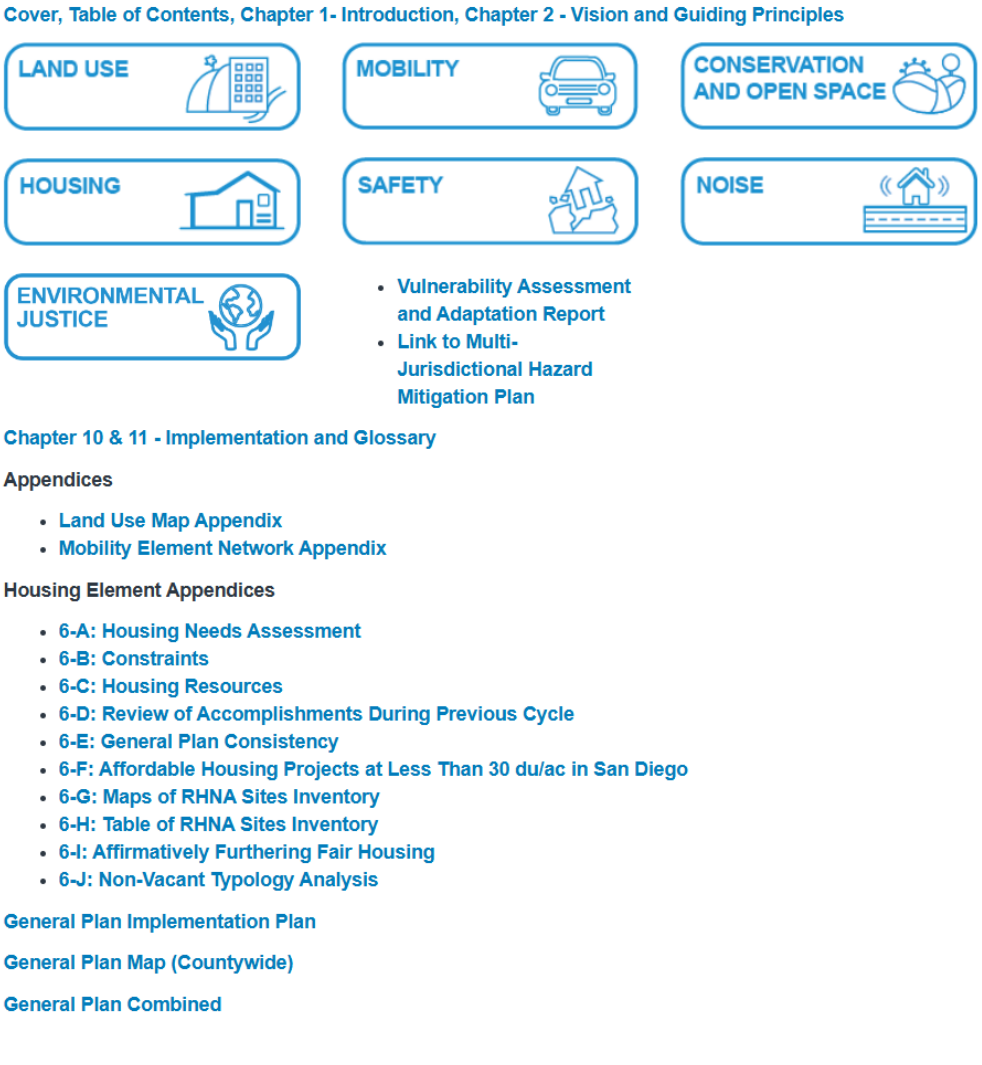


FIGURE 2: COUNTY OF SAN DIEGO GENERAL PLAN ELEMENTS
https://www.sandiegocounty.gov/content/sdc/pds/generalplan.html

FIGURE 3: UN'S 17 SUSTAINABILITY GOALS (https://www.un.org/sustainabledevelopment/blog/2016/07/17goals17days-progress-made-on-sustainable-development-goals/)

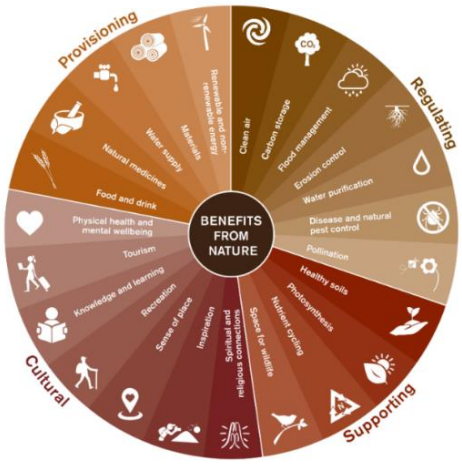


FIGURE 4: NATURE'S BENEFITS https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy-and-cop15/ecosystem-approach/ecosystem-services-natures-benefits

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FIGURE 5: BORREGO WATER DISTRICT
[Link to Borrego Water District](https://BorregoWD.org/)

FIGURE 6: BORREGO SPRINGS WATERMASTER
[Link to Borrego Springs Watermaster](https://BorregoSpringsWatermaster.com/)

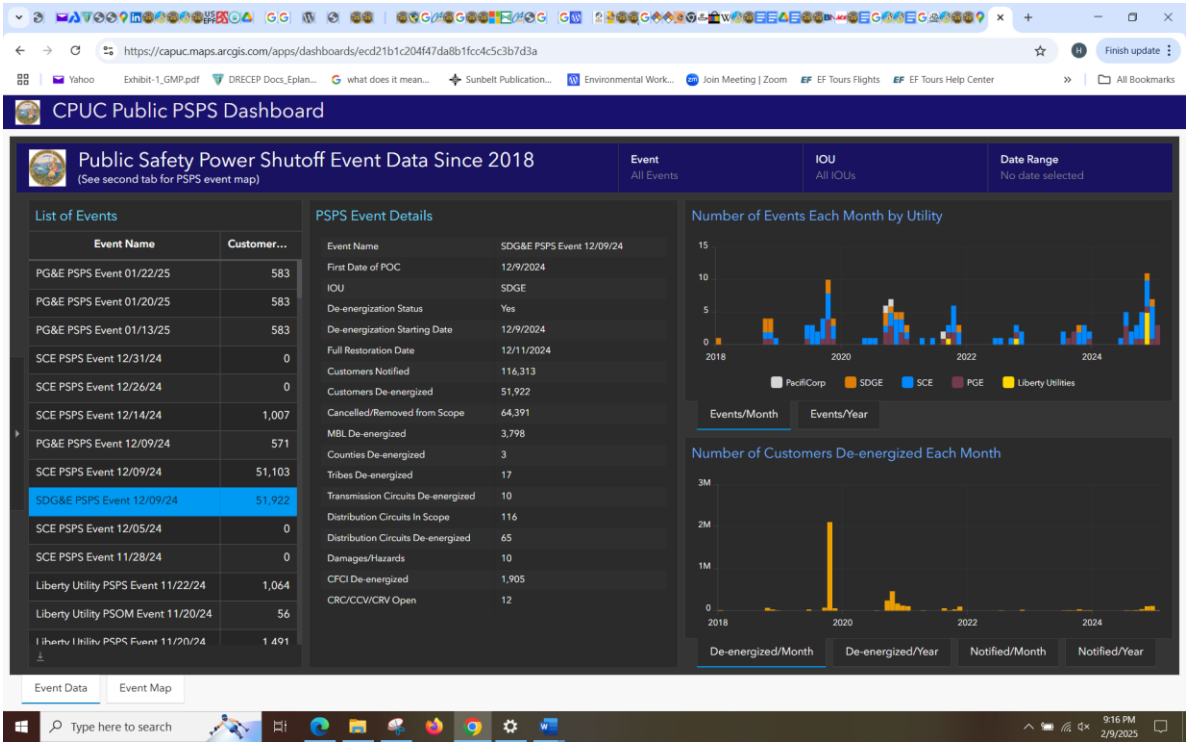


FIGURE 7: CPUC (IOUS ONLY) 51,992 SDGE PUBLIC SAFETY POWER SHUTOFFS 2018-2024

Exhibit A

WORK PLAN

Project Title: Implementation Project for the Borrego Springs Sub Basin (Project)

Project Description: The Work Plan includes activities associated with implementation and continued planning, development, and preparation of groundwater sustainability for the Borrego Valley Subbasin (Basin). The resulting work from this grant will incorporate appropriate Best Management Practices as developed by DWR, and will result in a more complete understanding of the groundwater subbasin to support long-term sustainable groundwater management. The Project contains construction and planning projects including updating the Groundwater Management Plan (GMP). The Work Plan includes eight Components:

Component 1: Grant Administration
Component 2: Advanced Meter Infrastructure
Component 3: Wastewater Treatment Plant Monitoring Wells
Component 4: Education Project
Component 5: Resiliency Strategy
Component 6: Biological Restoration of Fallowed Lands
Component 7: Monitoring, Reporting and Groundwater Management Plan Update
Component 8: Groundwater Dependent Ecosystem Identification, Assessment, & Monitoring

FIGURE 8: SGMA GRANT, EXHIBIT A, WORK PLAN

COMPONENT 5: RESILIENCY STRATEGY

Category (a): Component Administration

Category (b): Environmental / Engineering / Design Task 1: Planning

Task 2: Basin Characterization

Category (c): Implementation / Construction

Category (d): Monitoring / Assessment

Category (e): Engagement / Outreach Task 3: Watermaster Board Coordination

Task 4: Sponsor Group Coordination

Task 5: Coordination with Land Use Planning

Task 2: Basin Characterization

Compile and summarize research in collaboration with the region's experts (including, but not limited to, UC Irvine Anza-Borrego Desert Research Center researchers, Anza-Borrego Desert State Park environmental scientists, and Borrego Water District (BWD) in natural resources / environmental characteristics, planning, and governance to inform the community visioning process and the development of community priorities for the basin under Task 5. Identify and prioritize basin issues and opportunities, which will include potential basin restoration or management projects. Obtain feedback on summary white paper from a minimum of 5 water network partners and/or cooperators. Perform a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis of the natural resources within the basin.

Deliverables:

- White paper of basin characterization
- Factsheet summary of white paper and FAQ on website
- SWOT analysis of natural resources,
- Documentation of basin monitoring and evaluation roles, responsibilities, and decision-making protocols from authorities such as BWD, the GMP, technical consultants to parties in the basin, and other key federal, state and San Diego Co[illegible] entities

FIGURE 9: SGMA GRANT COMPONENT 5 RESILIENCY STRATEGY, TASK 2 BASIN CHARACTERIZATION

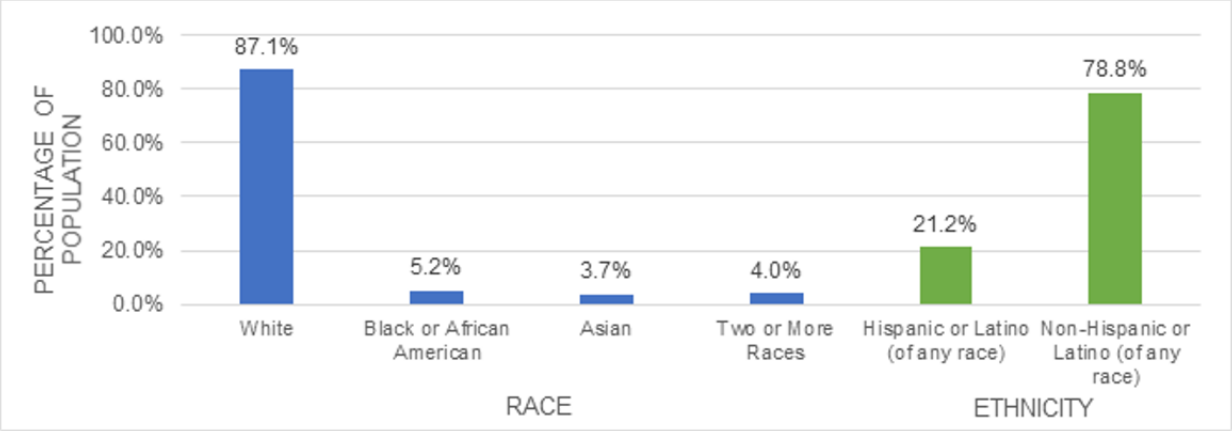


FIGURE 10: RACE AND ETHNICITY, 2016 AMERICAN COMMUNITY SURVEY DATA, BORREGO SPRINGS

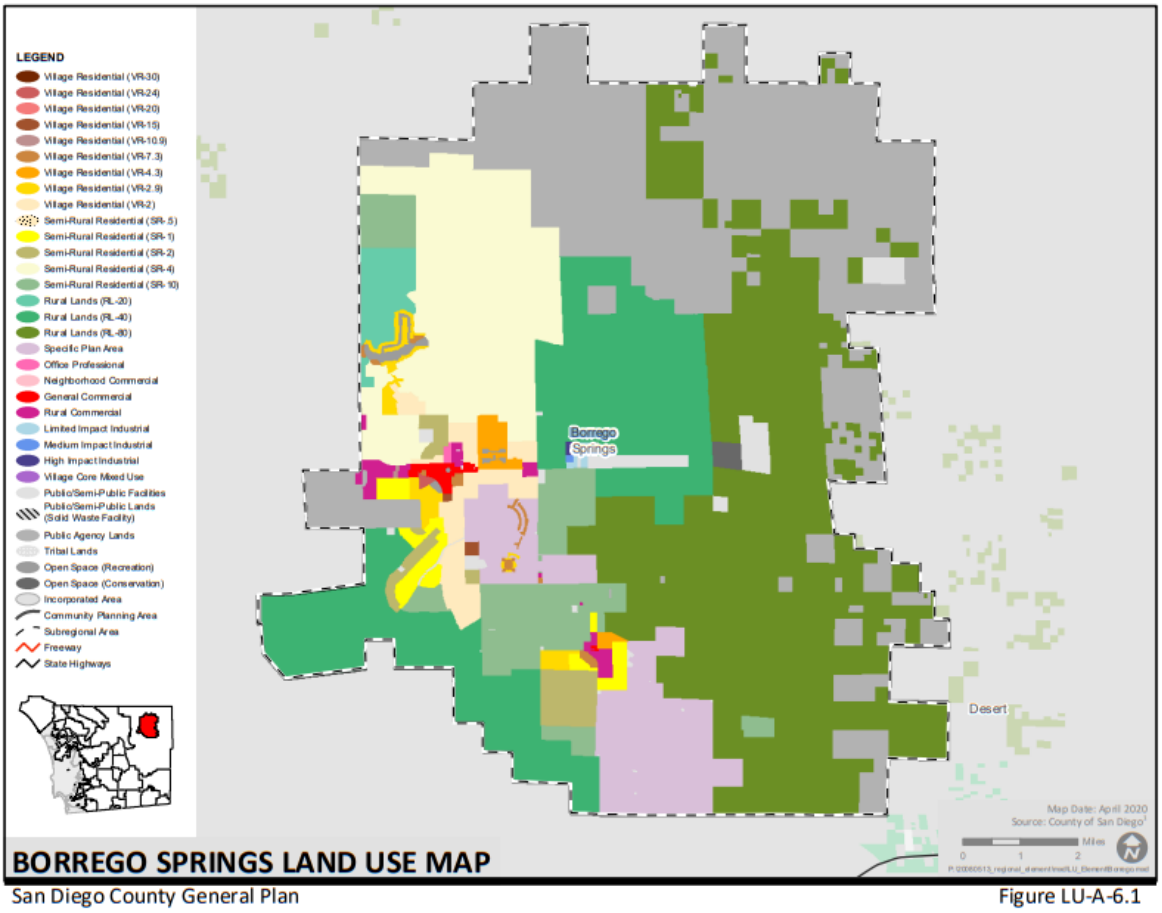


FIGURE 11: BORREGO SPRINGS LAND USE MAP (County General Plan 2011, Map Date 2020)

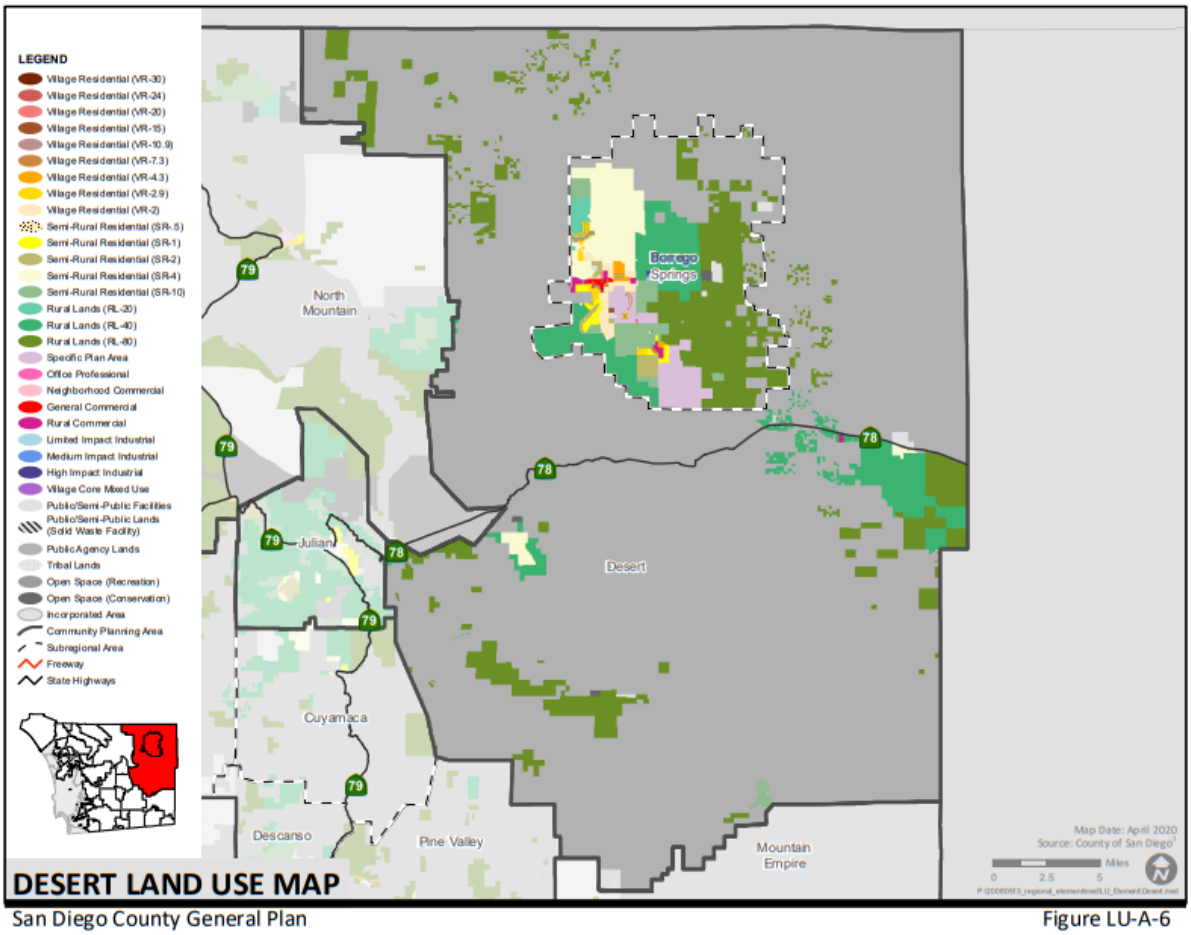


FIGURE 12: DESERT LAND USE MAP INCLUDING BORREGO SPRINGS (County General Plan 2011, Map Date 2020)

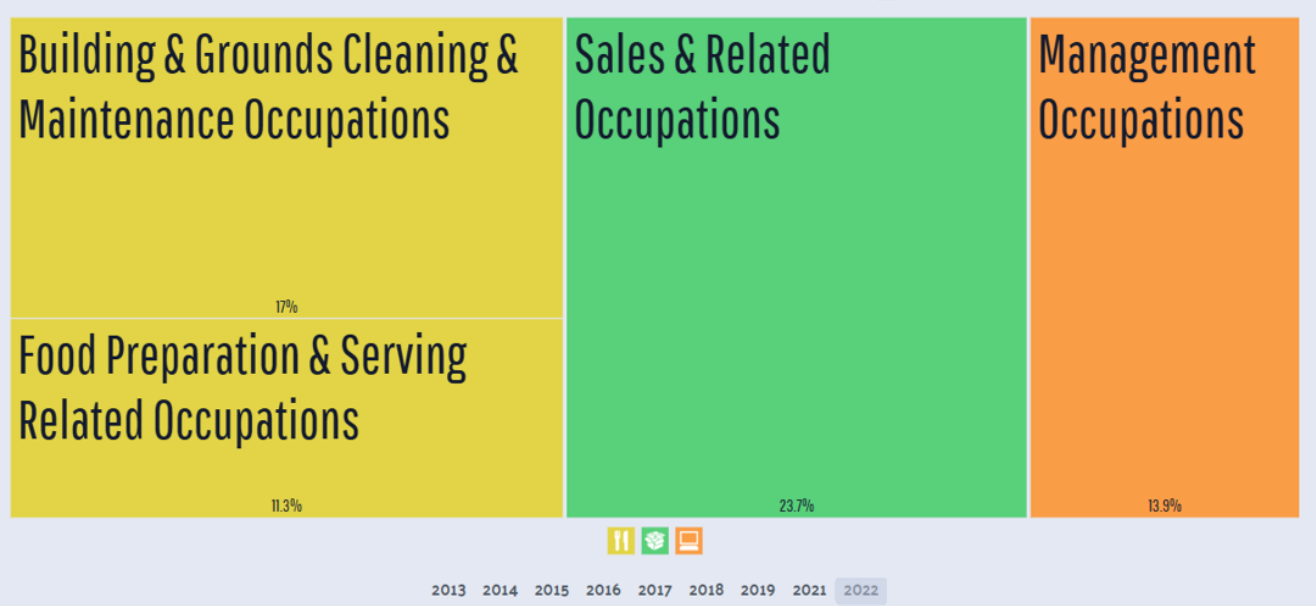


FIGURE 13: MOST COMMON BORREGO JOBS GROUPS IN 2022

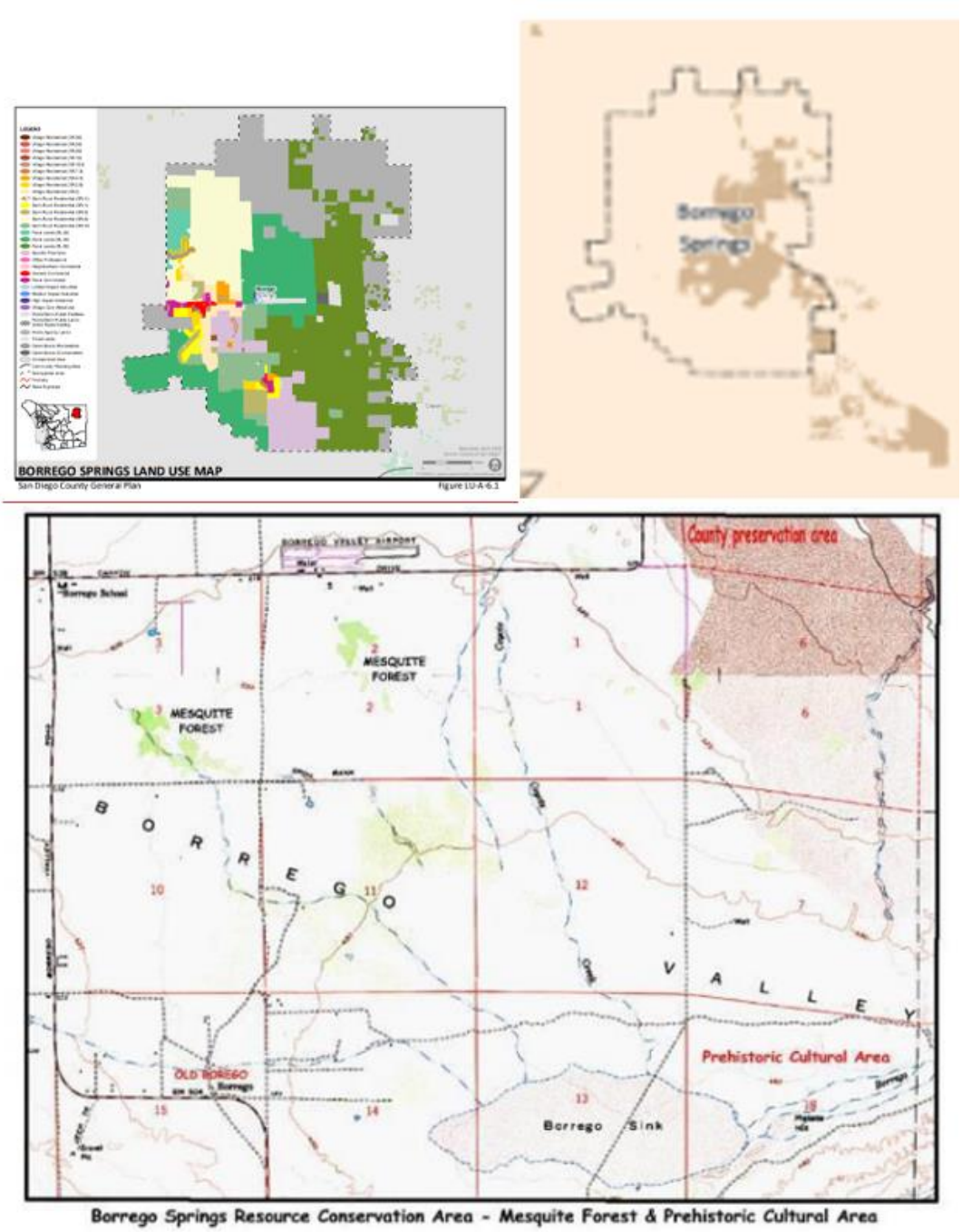


Figure 8: Mesquite Forests and Prehistoric Cultural Areas

FIGURE 14: BORREGO SPRINGS' ONLY RCA ELEMENT BLOCK SHOWN ON 3 MAPS: COUNTY LAND USE MAP 2020 WITH EXISTING RCA BLOCK IN GRAY DUE EAST OF "SPRINGS" ON THE MAP; EC MSCP 2008 PRELIMINARY FOCUSED CONSERVATION AREAS (FCAS) INCLUDES THE RCA BLOCK IN AN FCA BLOCK SLIGHTLY NORTHEAST OF THE END OF THE WORD "SPRINGS", AND BSCP 2011 FIGURE 8 SHOWING THE ORIGINAL RCA BLOCK WITH RESOURCES

6.3 Resource Conservation Areas (SS-RCA)

The following four elements, 6.3.a. - 6.3.d., are proposed for designation as Resource Conservation Areas under this Plan. (See Figure 7 below for the location of each).

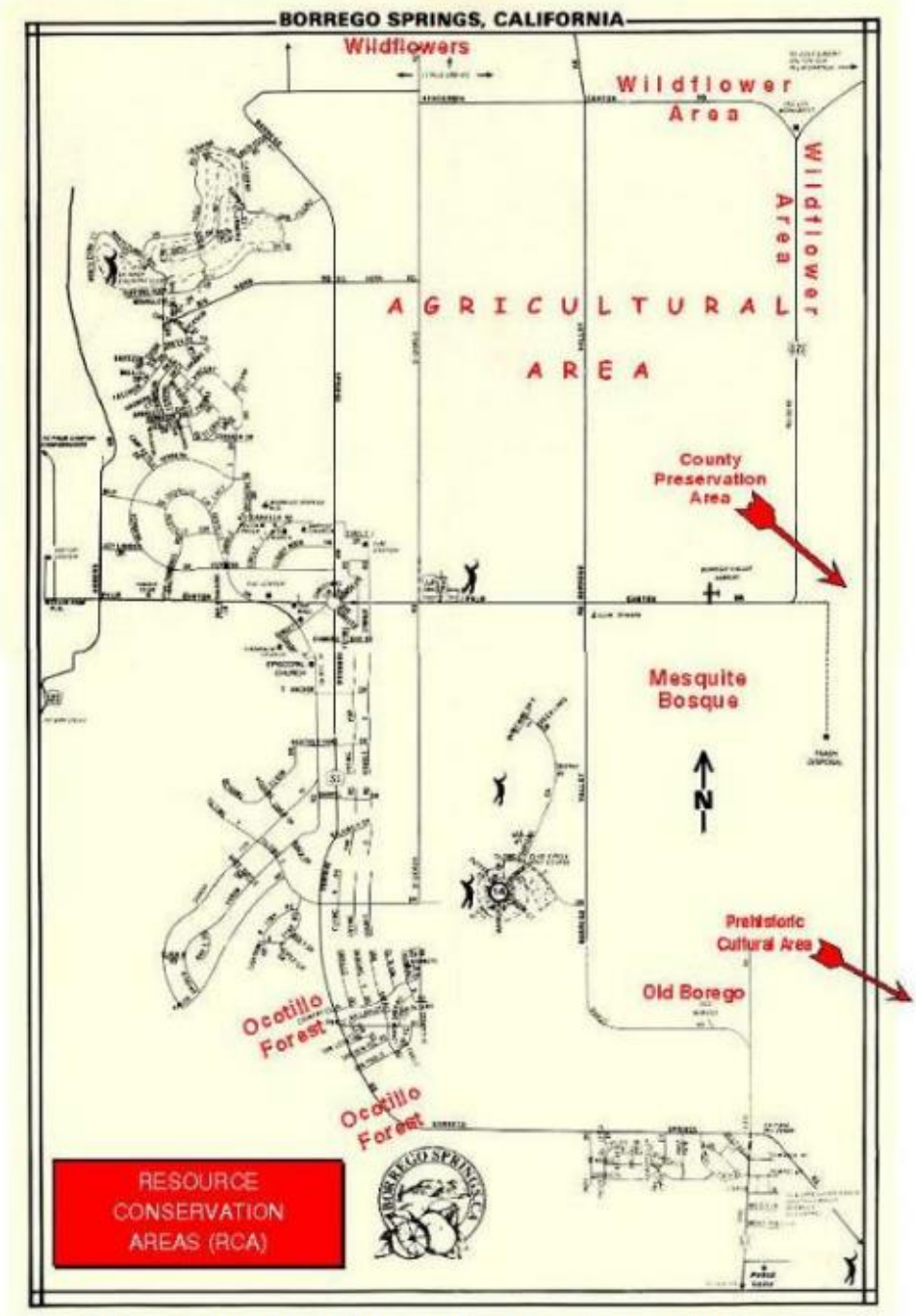


Figure 7: Location of Proposed Resource Conservation Areas

FIGURE 15: LOCATION OF 2011 PROPOSED RCAS (FIGURE 7 FROM BSCP 2011)

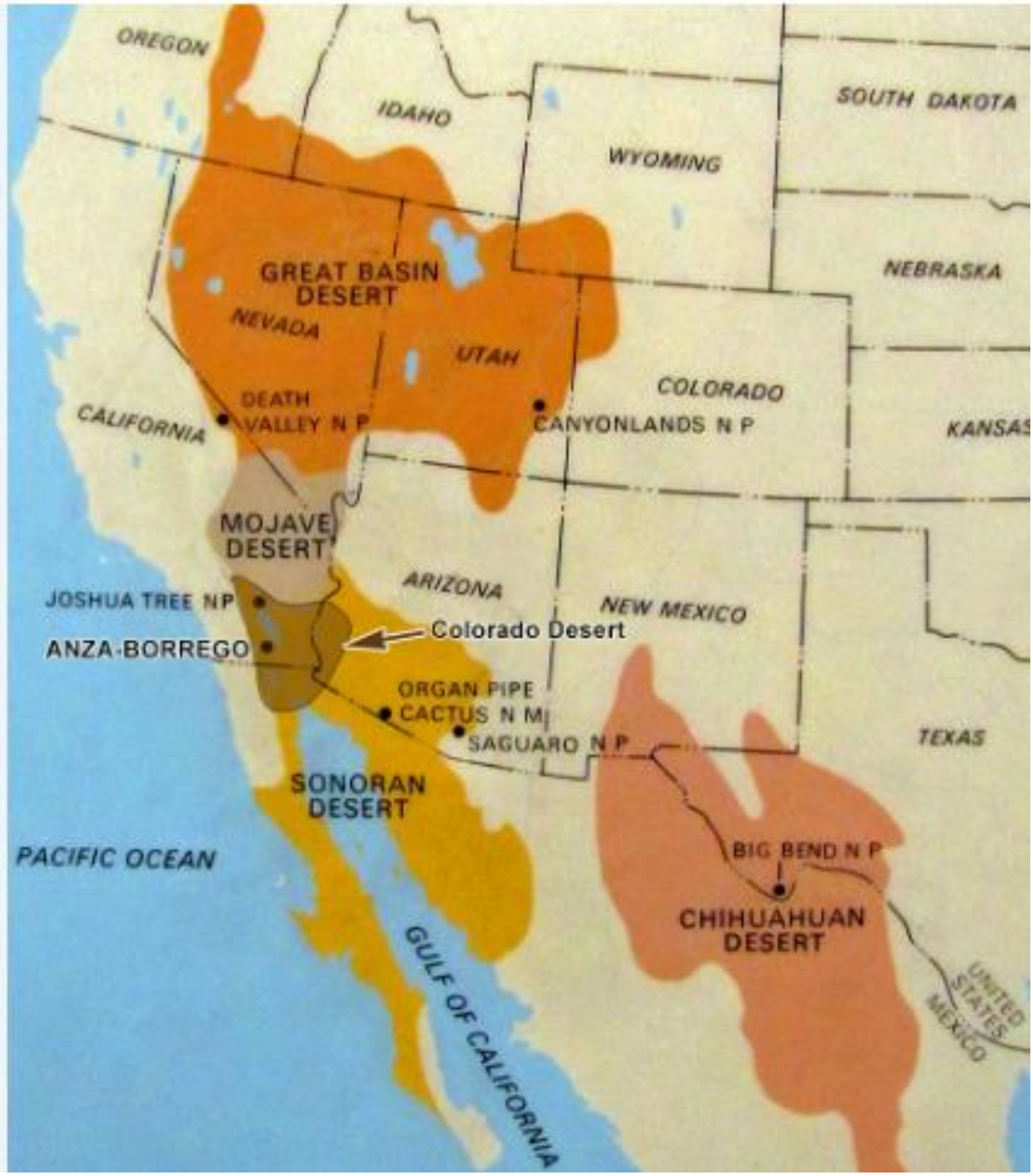


FIGURE 16: BORREGO'S DESERT LOCATION

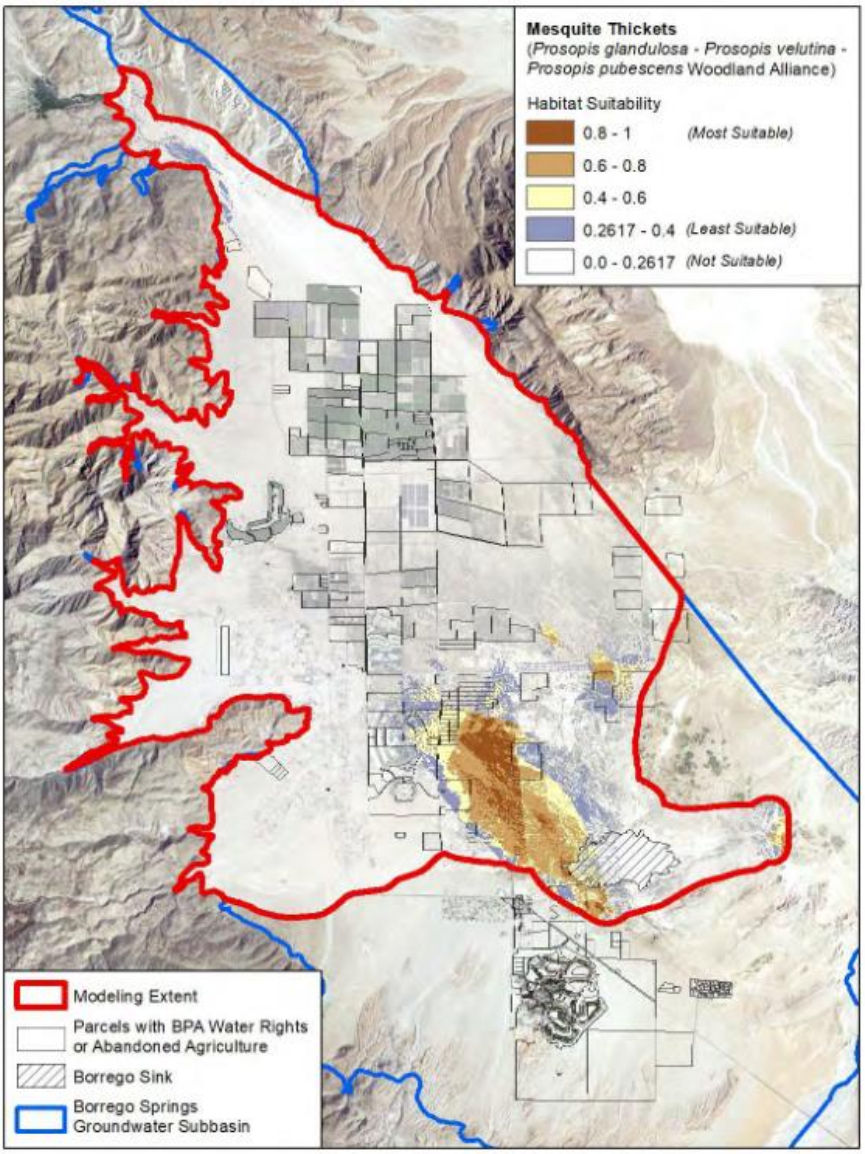


FIGURE 2-22. MESQUITE THICKETS (*PROSOPIS GLANDULOSA - PROSOPIS VELUTINA - PROSOPIS PUBESCENS* WOODLAND ALLIANCE) HABITAT SUITABILITY MODEL

FIGURE 17: MESQUITE THICKETS HABITAT SUITABILITY MODEL, (Land IQ, 2023)

FIGURE 18: BORREGO SPRINGS FALLOWING PRIORITIZATION MAP [Link to Borrego Springs Watermaster](https://borregospringswatermaster.com/wp-content/uploads/2023/06/Borrego-Lit-Review-2023-03-31-Final-with-Appendices.pdf)

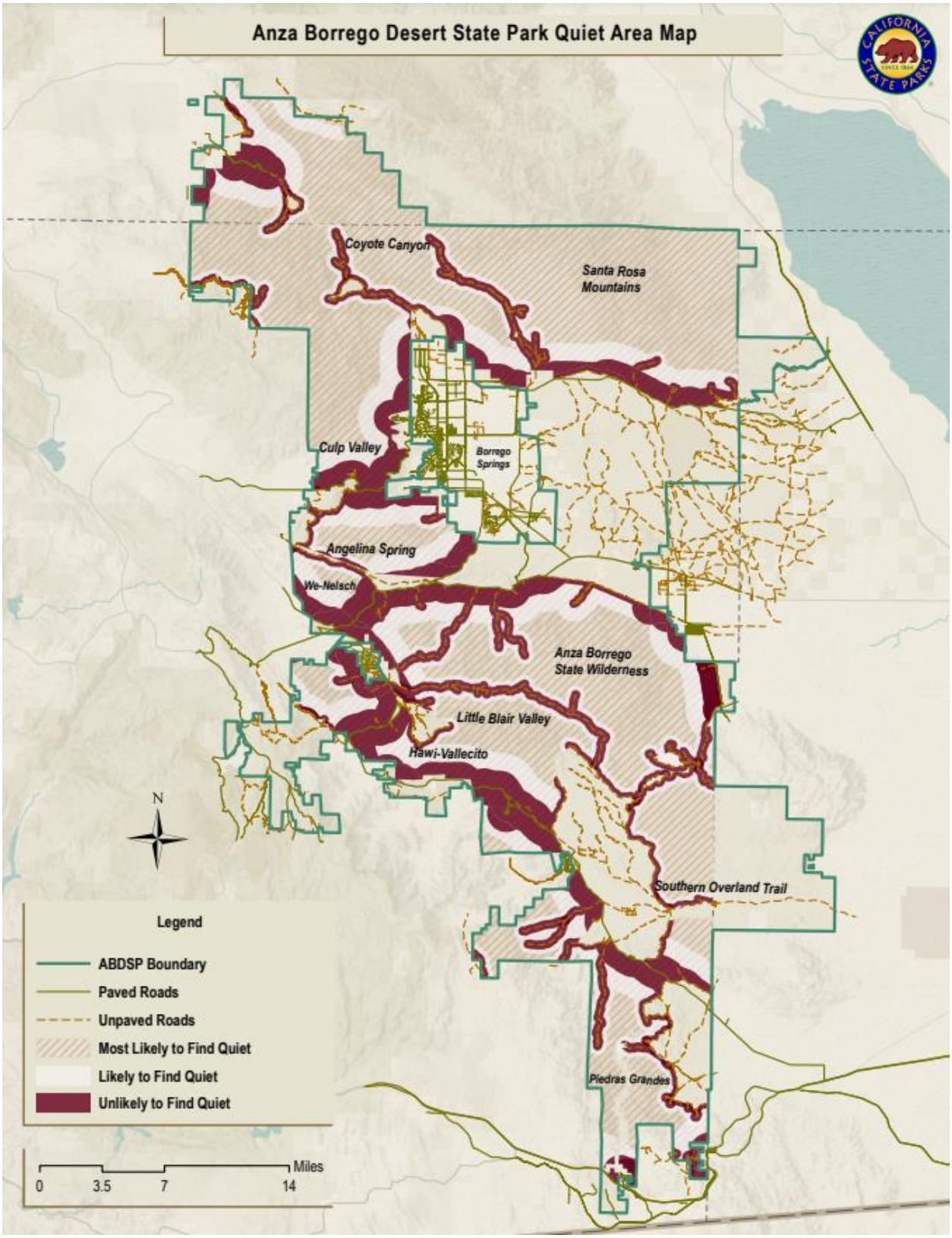


FIGURE 19: BORREGO'S QUIET AREA MAP (2023)

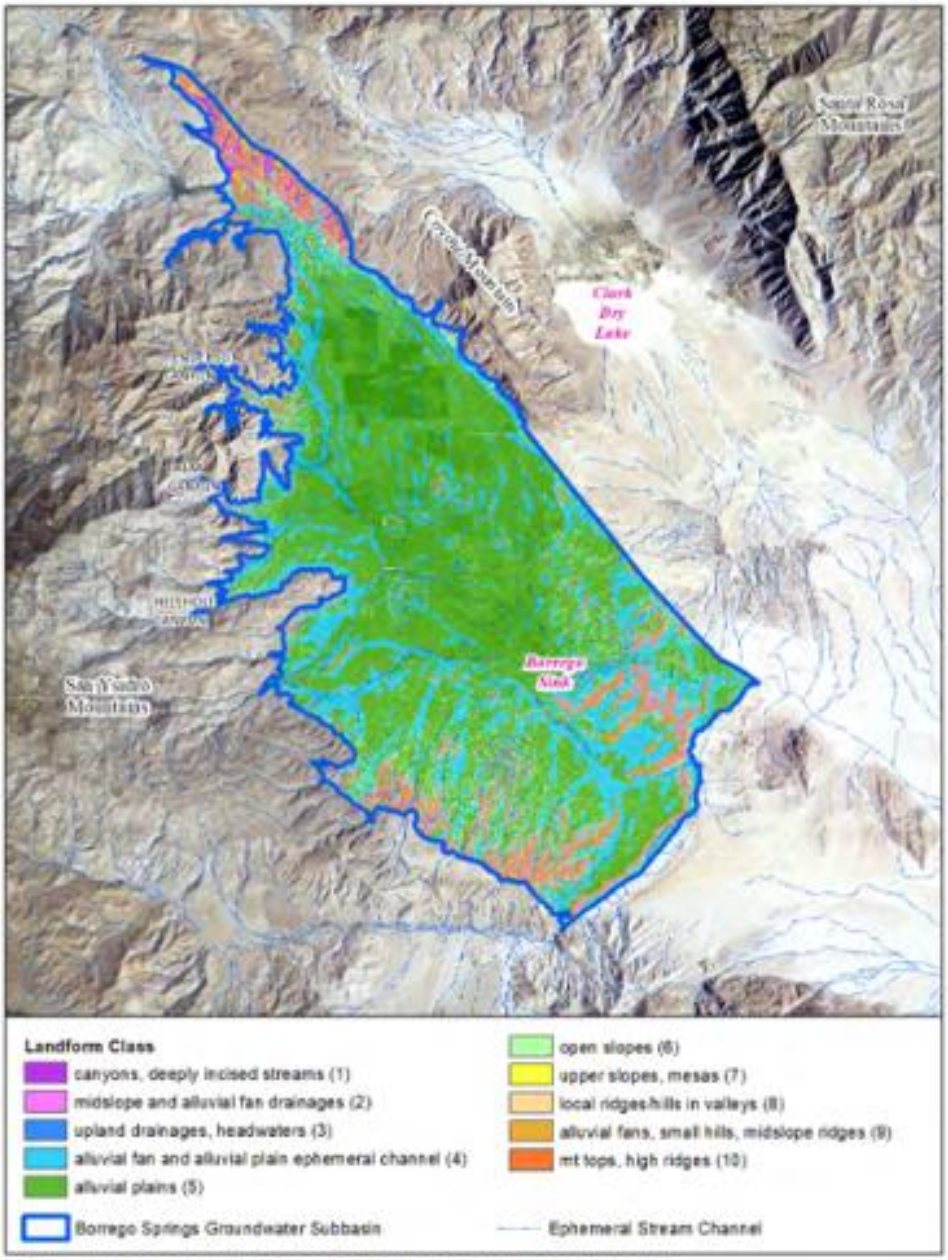
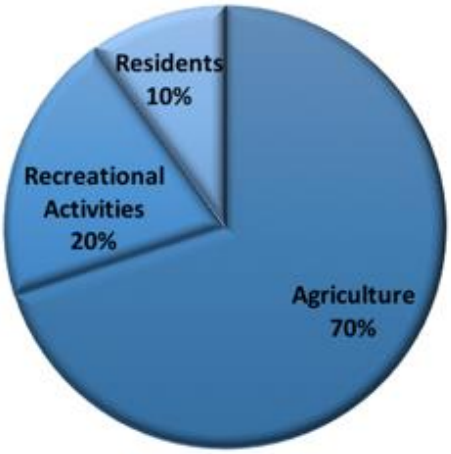


FIGURE 2-7. LANDFORMS IN THE BORREGO SPRINGS GROUNDWATER SUBBASIN.

Source: Topographic Position Index and Slope calculated from San Diego Regional DEM (2.5-ft resolution; 2015 and 2017 LIDAR data). Classification of landforms according to Weiss (2001). 2020 NAIP Aerial. Stream Data from USGS National Hydrography Dataset.

FIGURE 20: BS LANDFORM SHOWING LARGELY ALLUVIAL PLAINS AND FANS



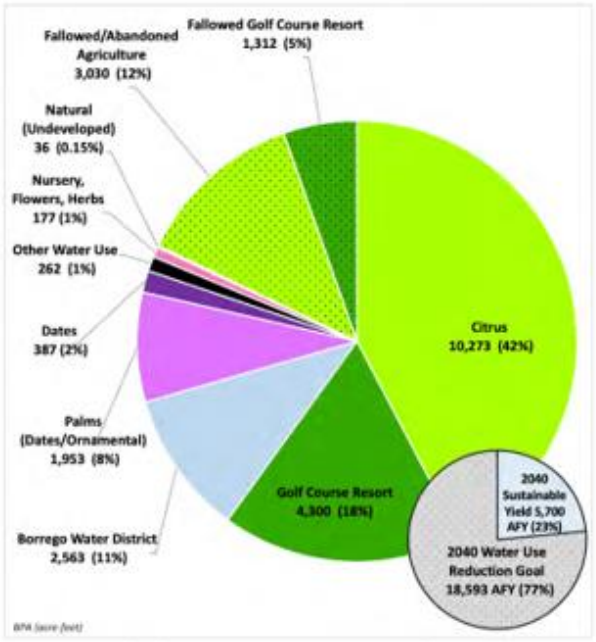


FIGURE 3-13. CURRENT (2022) LAND USE TYPE BY BASELINE PUMPING ALLOCATION [BPA IN AFY] AND FRACTION (%) OF TOTAL BPA (24,293 AFY).

Does not include 42 AFY BPA for De Minimis Water Rights for Borrego Unified School District and Anza Borrego Desert State Park

FIGURE 21: BORREGO WATER USE GRAPHS

BORREGO SPRINGS WHITE PAPER
TOWARDS A RESILIENT, INTEGRATED WATERSHED SCALE MASTER COMMUNITY PLAN AND COMMUNITY
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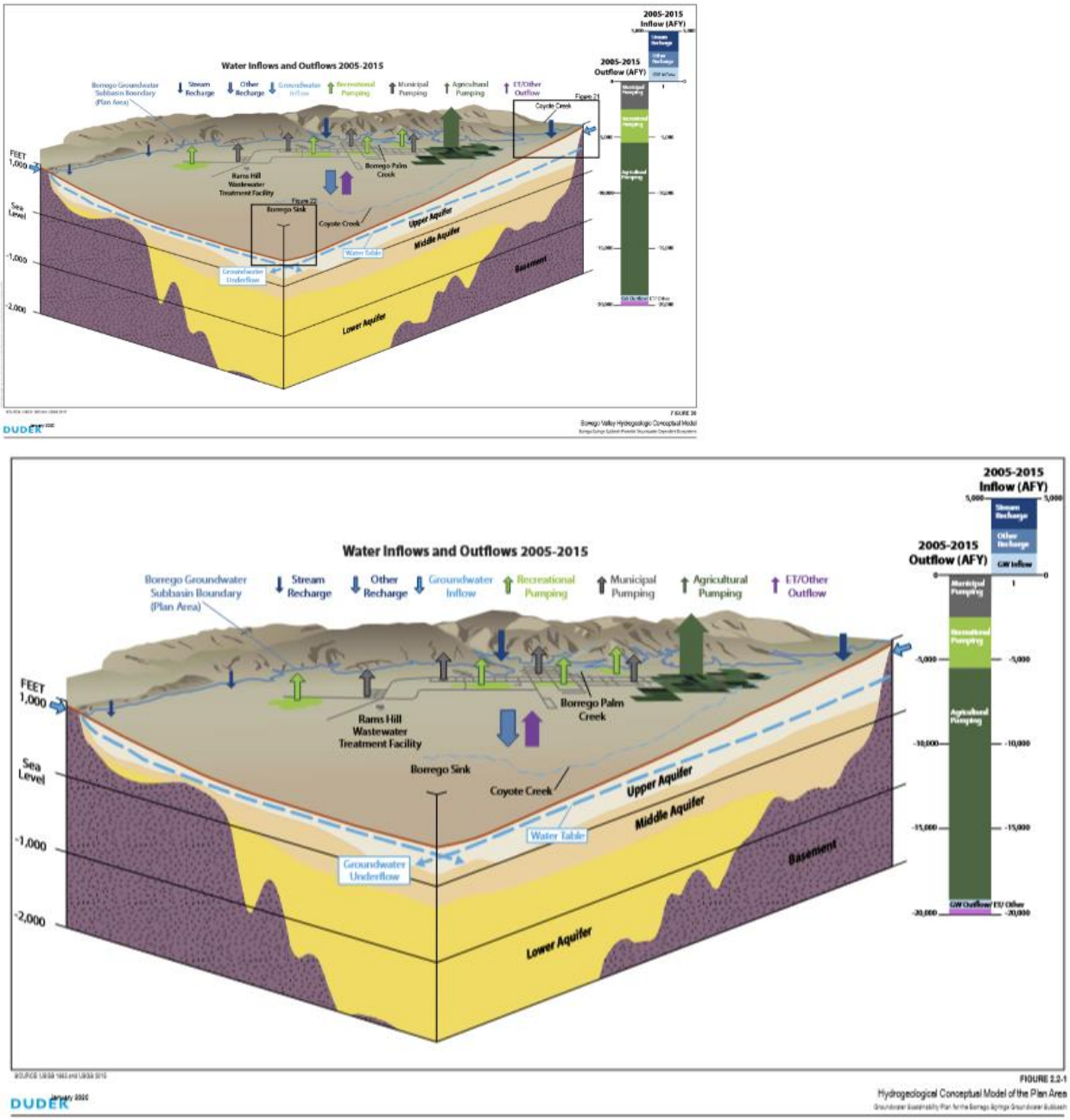


FIGURE 22: BORREGO VALLEY HYDROGEOLOGIC CONCEPTUAL MODEL, (Dudek in 2020 GMP)

Table 18. Groundwater Pumping by Sector - 2015 to 2023

Groundwater User Type	Annual Groundwater Extraction, acre-feet									
	2015[a]	2016[a]	2017[a]	2018[a]	2019[b]	2020[c]	2021[d]	2022[d]	2023[d],[e]	
Agricultural	15,093.73	15,007.35	13,668.09	13,006.45	13,025.81	12,771.21	11,282.89	8,986.39	7,189.78	69%
Recreational	3,137.39	3,045.22	3,058.91	2,973.94	2,807.67	2,245.84	2,317.84	2,131.40	1,408.81	13.5%
Municipal	1,719.91	1,610.42	1,568.04	1,593.74	1,466.48	1,541.42	1,528.84	1,545.46	1,516.10	14.5%
Other Non-De Minimis	50.40	49.72	47.93	52.51	52.51	52.51	91.89	374.42	288.69	2.7%
De Minimis	26.50	26.50	26.50	26.50	26.50	26.50	26.50	26.50	26.50	.03%
Total Pumping	**20,027.93**	**19,739.21**	**18,369.47**	**17,653.14**	**17,378.97**	**16,637.48**	**15,247.96**	**13,064.17**	**10,429.88**	

(a) Source for 2015-2018 estimates: Dudek, 2020b;

FIGURE 23: HISTORY OF GROUNDWATER PUMPING FOR 2015-2023 BY SECTOR WITH OVERALL MEAN SECTOR PUMPING PERCENTAGE (2015-2018) (Dudek in 2020 GMP)

Specific tasks of the Biological Restoration of Fallowed Lands component include the following:

Task 1.	Review and Analysis of Existing Data
Task 2.	Existing Fallowed Farmland and Reference Natural Habitat Field Study
Task 3.	Brush Pile Wildlife Sand Fence Case Study
Task 4.	Farmland Fallowing Rehabilitation Strategies
Task 5.	Farmland Fallowing Prioritization
Task 6.	Watermaster's Environmental Working Group Meetings

Land IQ
March 2023

FIGURE 24: SGMA GRANT COMPONENT 6 BIOLOGICAL RESTORATION OF FALLOWED LANDS TASKS

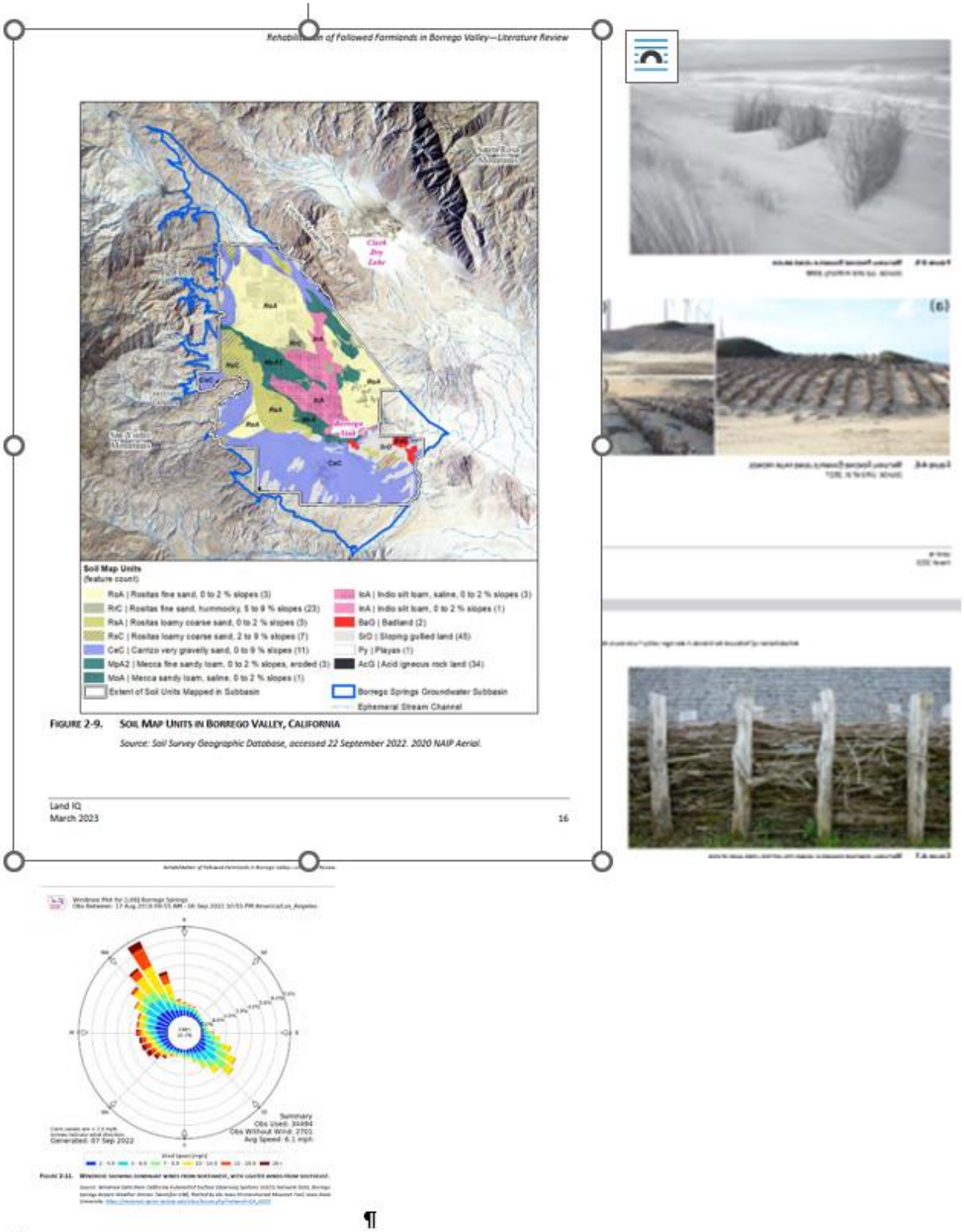


FIGURE 25: SOILS RELATIVE TO WIND PATTERNS AND VARIOUS METHODS OF FALLOW REHABILITATION Source Land IQ and UCI March 2023

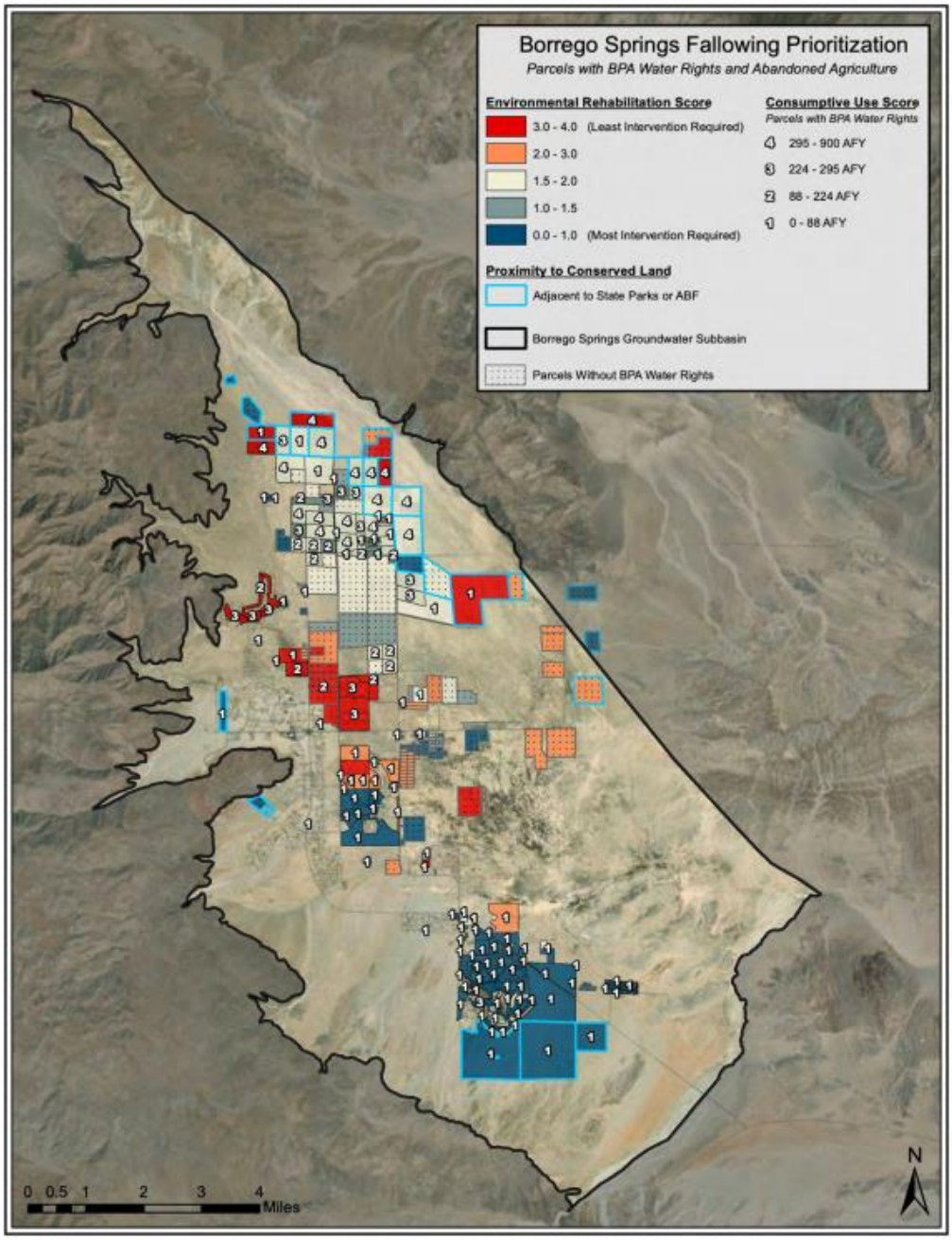


FIGURE 6-1. INTERIM BORREGO SPRINGS FALLOWING PRIORITIZATION

FIGURE 26: BORREGO SPRINGS FALLOWING PRIORITIZATION MAP
https://borregospringswatermaster.com/wp-content/uploads/2023/06/Borrego-Lit-Review-2023-03-31-Final-with-Appendices.pdf

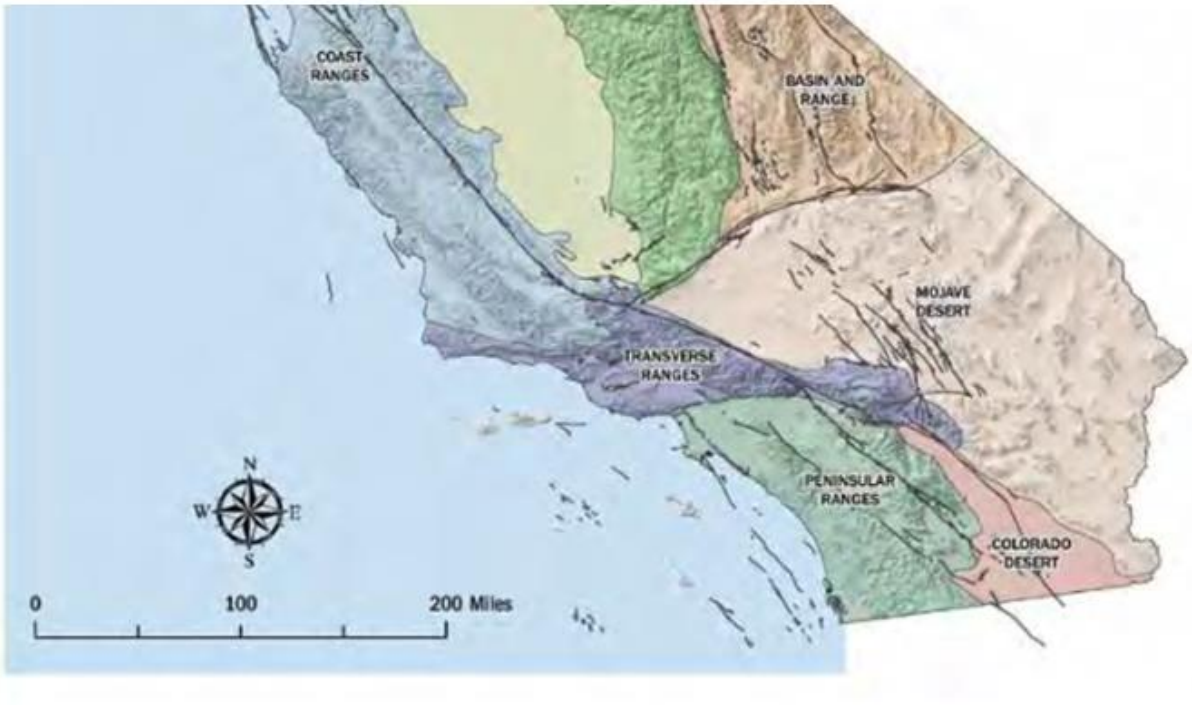


Figure 2-1: Geomorphic provinces with major active faults in black. Note how the faults virtually define many province boundaries.

FIGURE 27: BORREGO AREA FAULT LINES SHOWN IN BLACK
Geological Gems of California State Parks, Special Report 230 – Fuller, M., Brown, S., Wills, C. and Short, W., editors, 2015, Geological Gems of California, California

Department of Public Works

Guidelines for Flood Protection of Structures in Borrego Springs

Purpose – To offer information concerning the existing County ordinances and policies regarding flood protection for new structures in Borrego Springs.

Background - The Federal Emergency Management Agency (FEMA) provides federal flood insurance, emergency aid, and assistance in the event of natural disasters. In order for the citizens and local government to qualify for the federal flood insurance, FEMA requires local governments to adopt and enforce certain minimum floodplain management standards.

On December 7, 1993, the Board of Supervisors adopted the *County Flood Damage Prevention Ordinance #8334*, which establishes flood protection criteria for construction of structures in flood prone areas.

On October 17, 1989, the Board accepted the Boyle Engineering report, *Borrego Valley Flood Management Report*, which specifically deals with flood protection on alluvial fans in Borrego Springs.

Alluvial Fans – Alluvial fans are created when flash floods move rapidly down the steep desert canyons, depositing sand and debris in a fan-shaped pattern onto the desert floor. Smaller flood flows will typically move along an existing channel, or wash, on the fan for several years until either an obstruction is encountered or the sediment builds up on that section of the fan to a level at or above the general elevation of the local fan. When this condition is reached, the floodwaters can suddenly change course and move to a new wash location on the fan. A design-storm flood is typically too large for the existing washes, will tend to sheet flow across the fan, and may even establish a new wash location. Therefore, all areas on the fan are subject to flooding unless appropriate flood protection is provided.

Specific Sources of Flash Floods – Box Canyon, Unnamed Canyon, Coyote Canyon, El Vado Canyon, Henderson Canyon, Borrego Palm Canyon, Fire Canyon, Hellhole Canyon, Dry Canyon, and Culp-Tubb Canyon complexes have been analyzed and mapped by the County to assist in designing flood protection on these alluvial fans. These areas are shown on the FEMA Flood Insurance Rate Map (FIRM).

The NFIP identifies alluvial fan hazards on FIRMs as Zone AO and provides information on flood depths and velocities. AO zones are Special Flood Hazards Areas (SFHA) subject to inundation by 1% annual chance (100-year) sheet-type flow, which are sometimes associated with high velocities.

Flood Protection - Construction within alluvial fan areas is subject to certain regulations (in addition to those which apply to *all* SFHA's) found in Chapter 44 of the Code of Federal Regulations, Part 60.3:

- Elevate lowest floor (including basement) above the highest adjacent grade to at least as high as the depth number specified on the FIRM. It is recommended, however, that the depth of flow assumed for a site should take into consideration local topographic anomalies when determining the elevation of any flood protection measure.
- Mechanical and utility equipment must also be placed above the depth of flooding.
- Provide adequate drainage paths around structures on slopes, to guide floodwater around and away from proposed structures. The intent is to prevent scour from undermining the foundation of the structure, thus preventing structural collapse.
- Do not deflect flood flow onto adjacent properties.

Summary - Several methods of flood protection are available for flood safe construction in Borrego Springs. However, there is no one method of design acceptable for use on every lot. The method of flood protection chosen for your property must adequately address the local conditions of the land on and upstream of your property. Lots with unique characteristics may require special engineering studies to determine associated flood hazards and flood protection details.

Before purchasing any lot or architectural plans, the potential project owners/developers should obtain all available information about the local geology and possible flood hazards. It is the property owner's responsibility to make certain that the lot and plans together satisfy intended project goals and incorporate flood protection for their property without detriment to adjacent properties. For additional information, please contact the Flood Control Counter at the County of San Diego Operations Center Annex at (858) 694-2112. Information can also be found on the county website at: https://www.sandiegocounty.gov/content/sdc/dpw/flood.html.

RFIGURE 28: COUNTY DEPARTMENT OF PUBLIC WORKS, GUIDELINES FOR FLOOD PROTECTION OF STRUCTURES IN BORREGO SPRINGS, Source: County, Date Unknown.

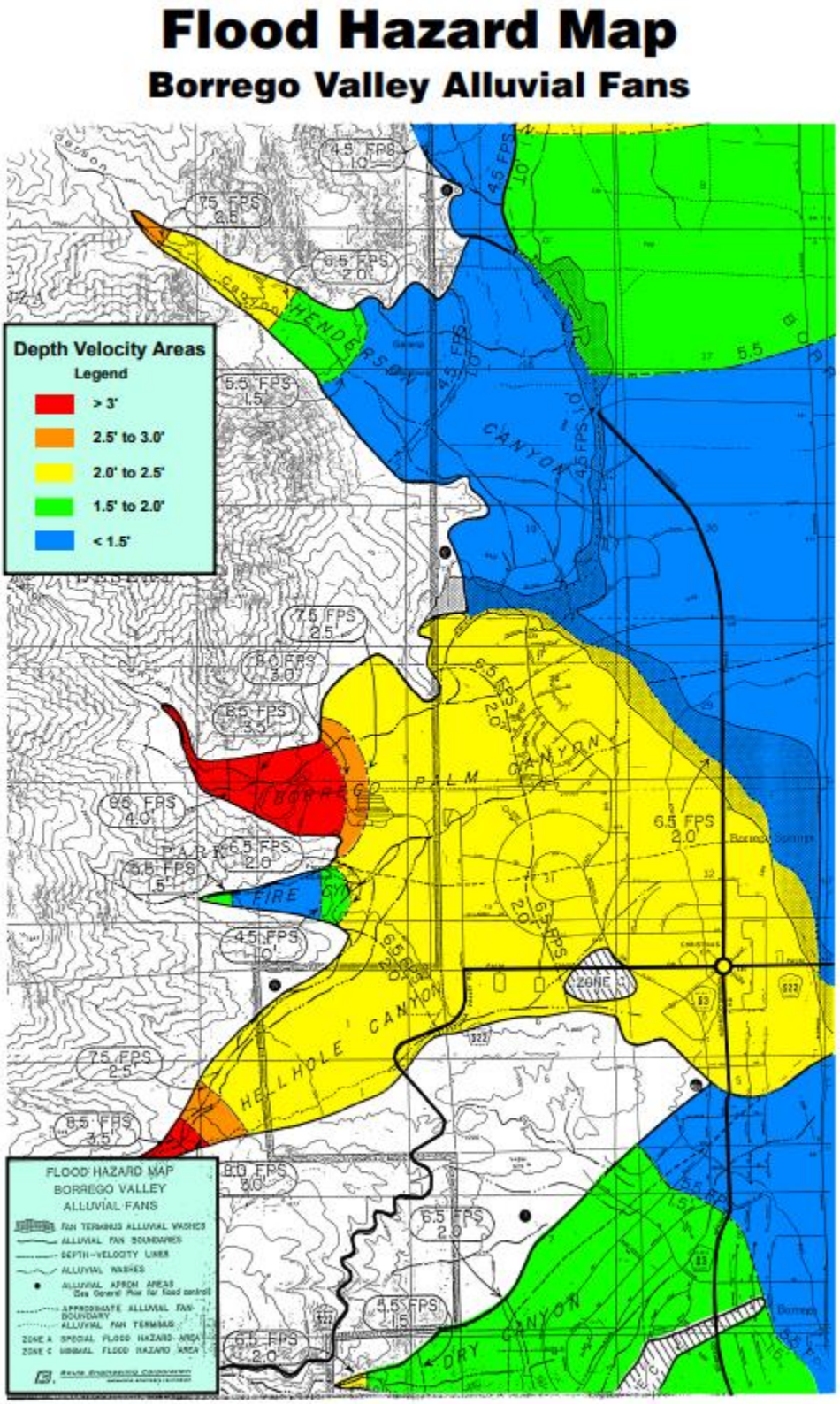


FIGURE 29: FLOOD HAZARD MAP, BORREGO VALLEY ALLUVIAL FANS

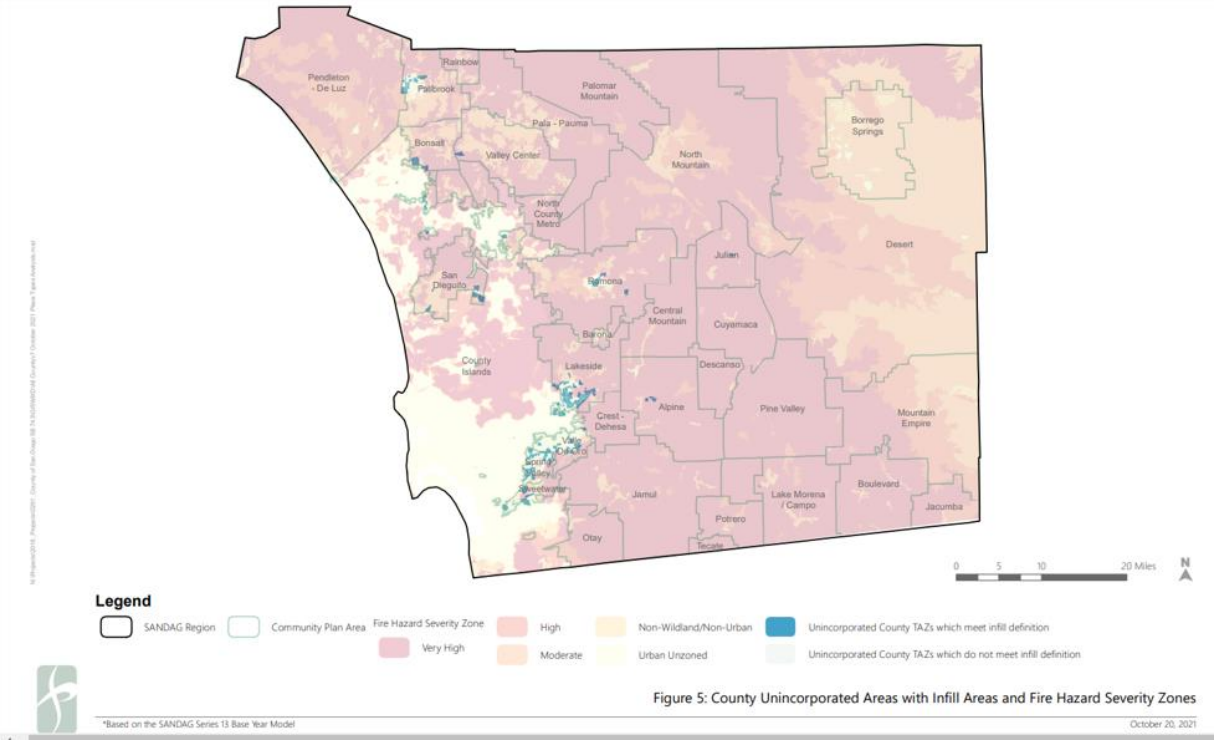
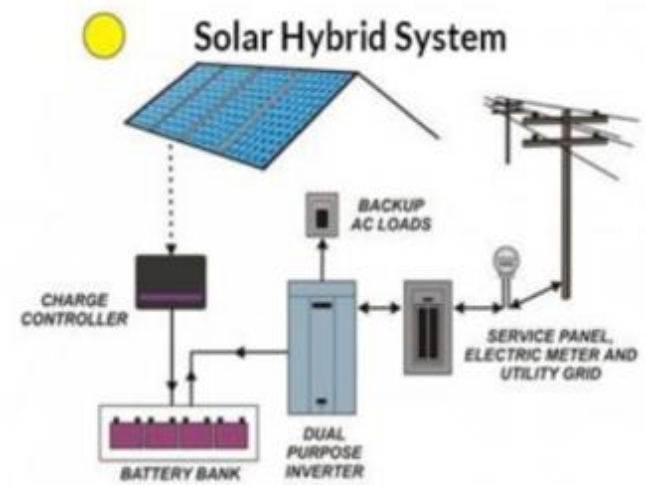


FIGURE 30: BORREGO SPRINGS IS MAINLY MODERATE FIRE RISK

Source:
https://capuc.maps.arcgis.com/apps/dashboards/ecd21b1c204f47da8b1fcc4c5c3b7d3a

California Independent System Operator

CommPR/AG/02.2025



THIS? → → → → → OR THIS? Source: ZunRoof

FIGURE 31: INDUSTRIAL TRANSMISSION ORIENTED GRID OR LOCALLY DISPERSED ROOF TOP ENERGY (W/OR WITHOUT INTERACTIVE GRID CONNECTION)

BORREGO SPRINGS WHITE PAPER
TOWARDS A RESILIENT, INTEGRATED WATERSHED SCALE MASTER COMMUNITY PLAN AND COMMUNITY
MARCH 2025

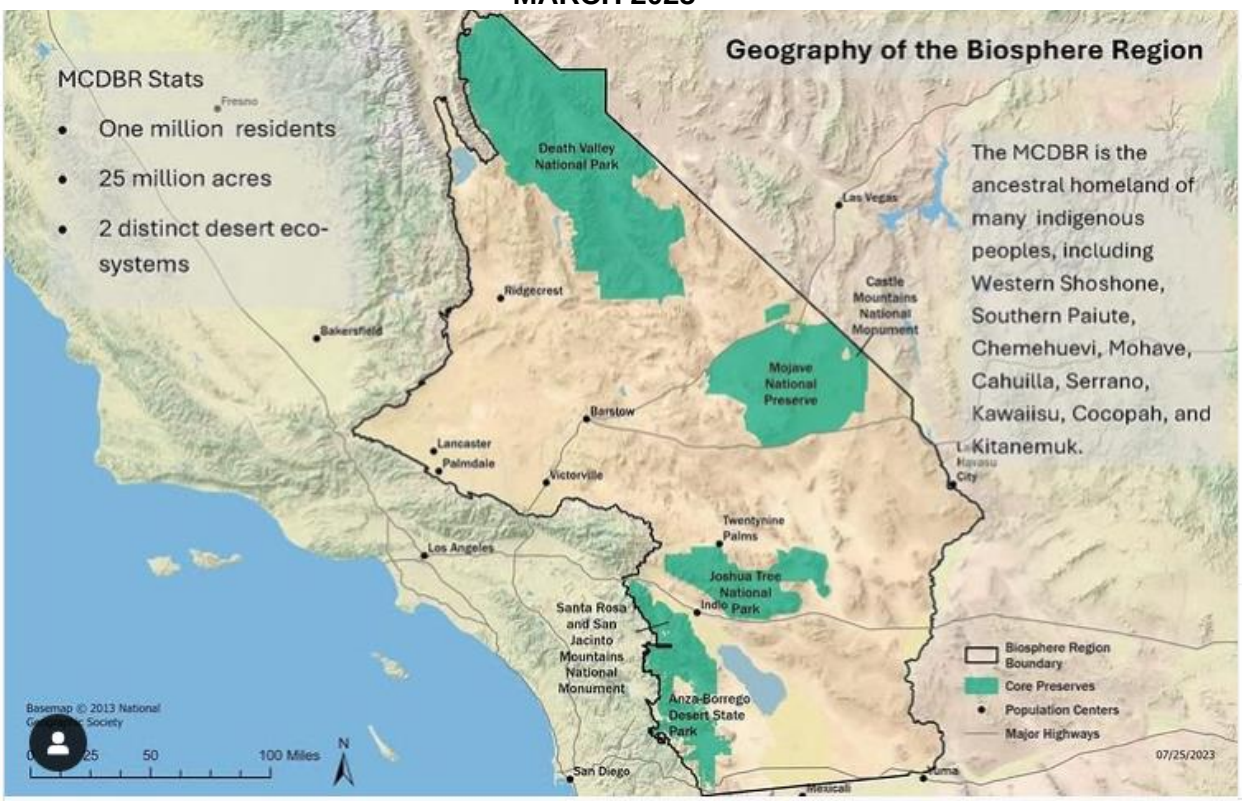


FIGURE 32: BORREGO SPRINGS AND SURROUNDINGS - ANCESTRAL HOMELANDS, BIOLOGICAL CORE PRESERVES (ABDSP) WITHIN THE LARGER MOJAVE AND COLORADO DESERTS BIOSPHERE RESERVE, from AB Instagram page

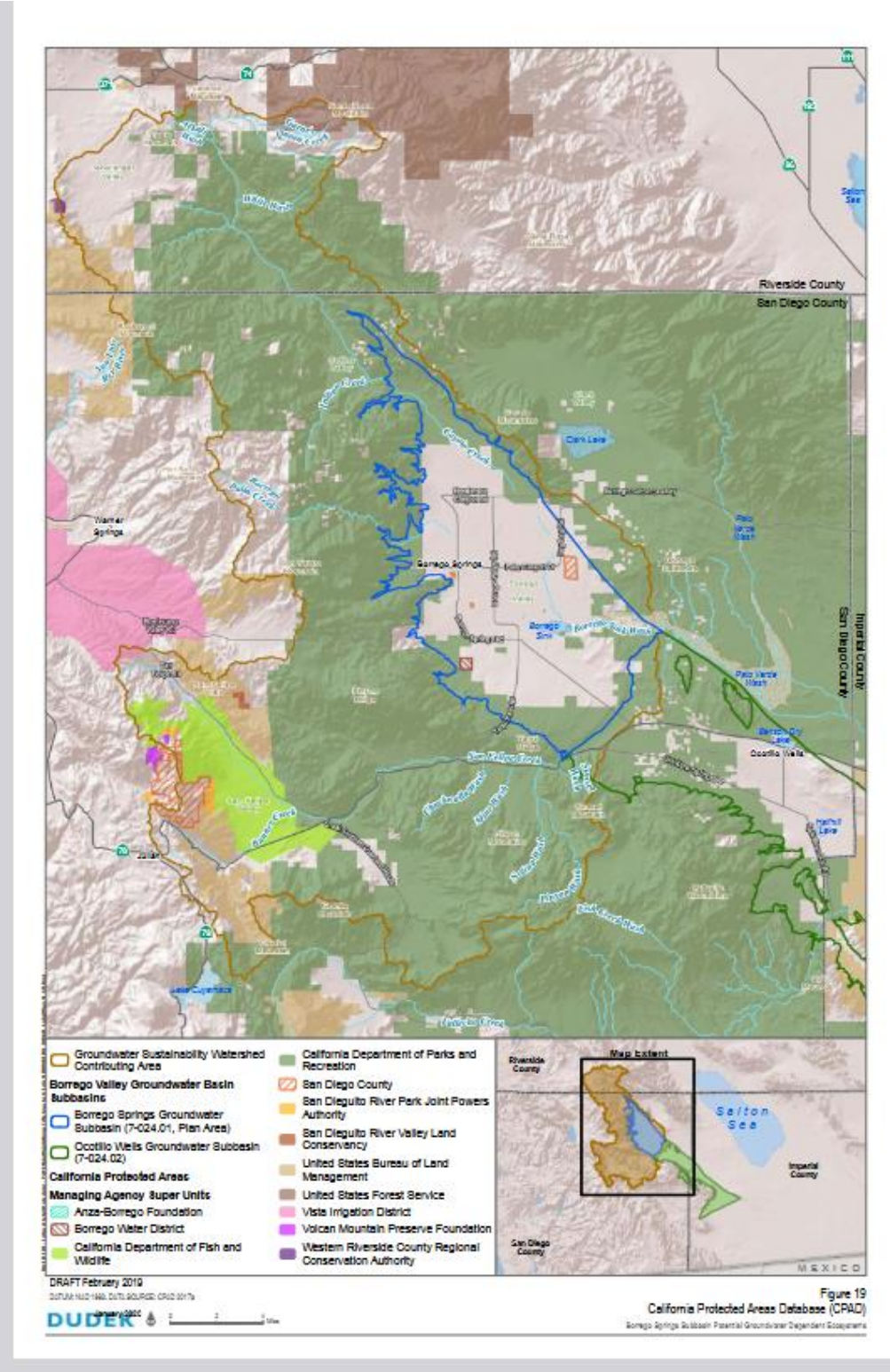


FIGURE 33: CA PROTECTED AREAS DATABASE (CPAD) SHOWING BORREGO SPRINGS CPA WITH ABUTTING PROTECTED LANDS (from Dudek GDE doc)

FIGURE 34: ADVANTAGES AND BENEFITS OF STATE AND FEDERAL CONSERVATION PLANNING, Pathways to 30x30 Final Report, April 2022

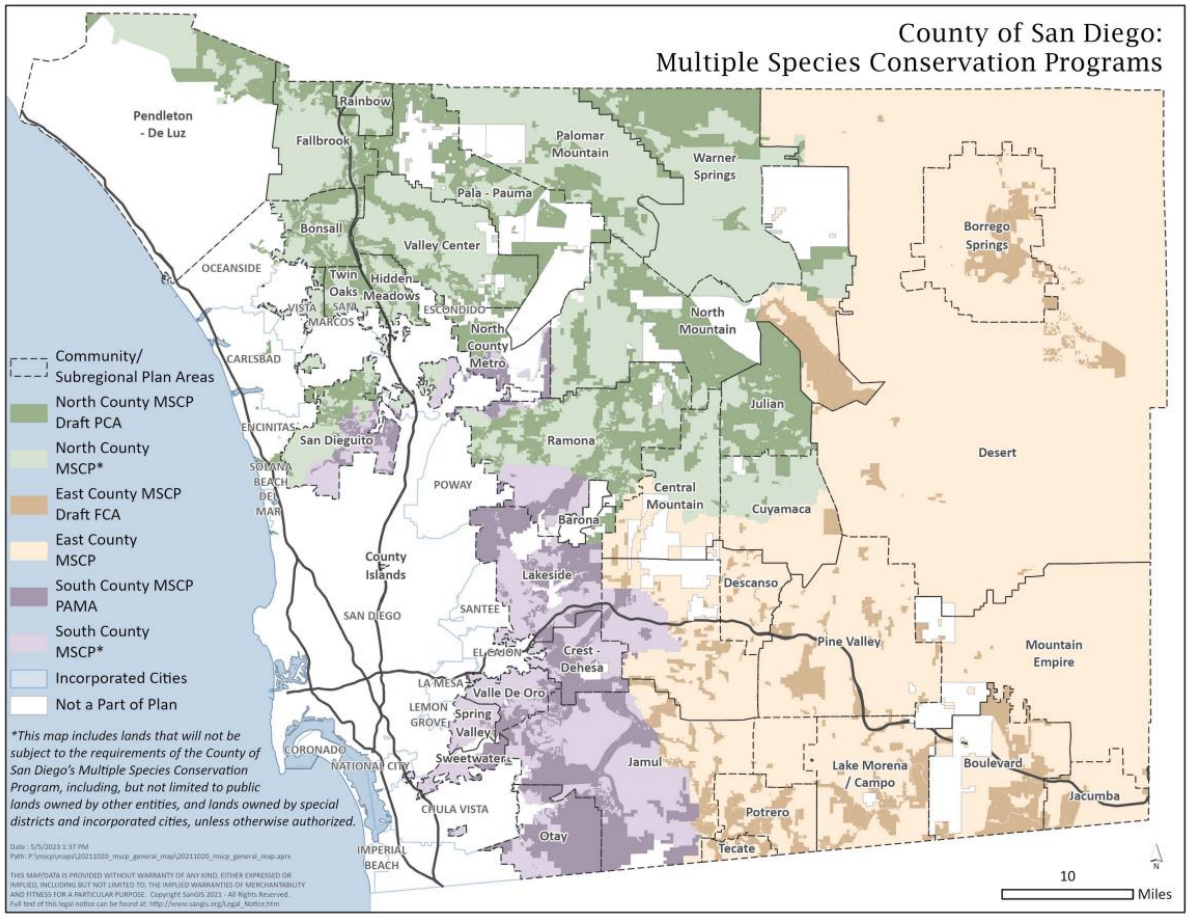


FIGURE 35: COUNTY GENERAL MSCP MAP 2023

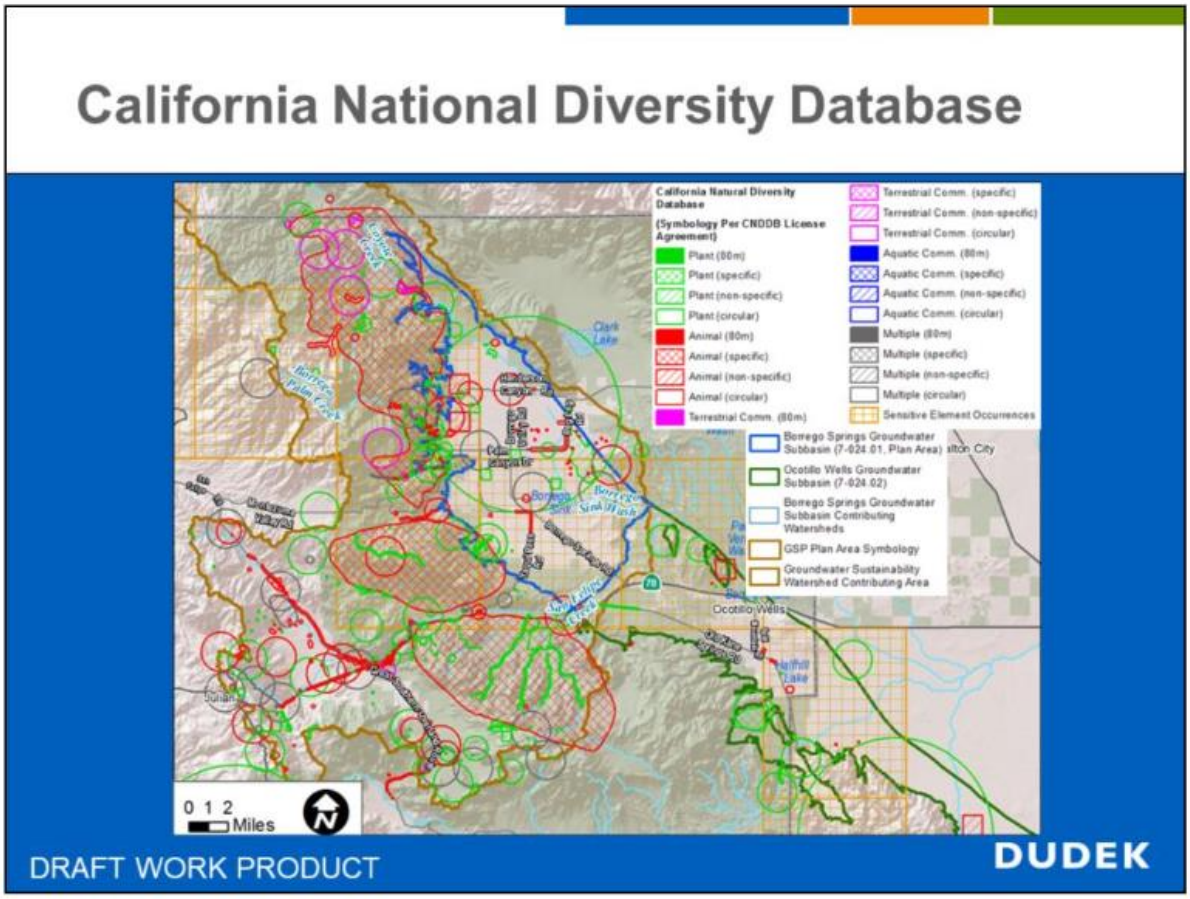


FIGURE 36: CALIFORNIA NATIONAL DIVERSITY DATABASE (CNDDB) ENTRIES IN AND NEAR BORREGO SPRINGS(Dudek GDE)

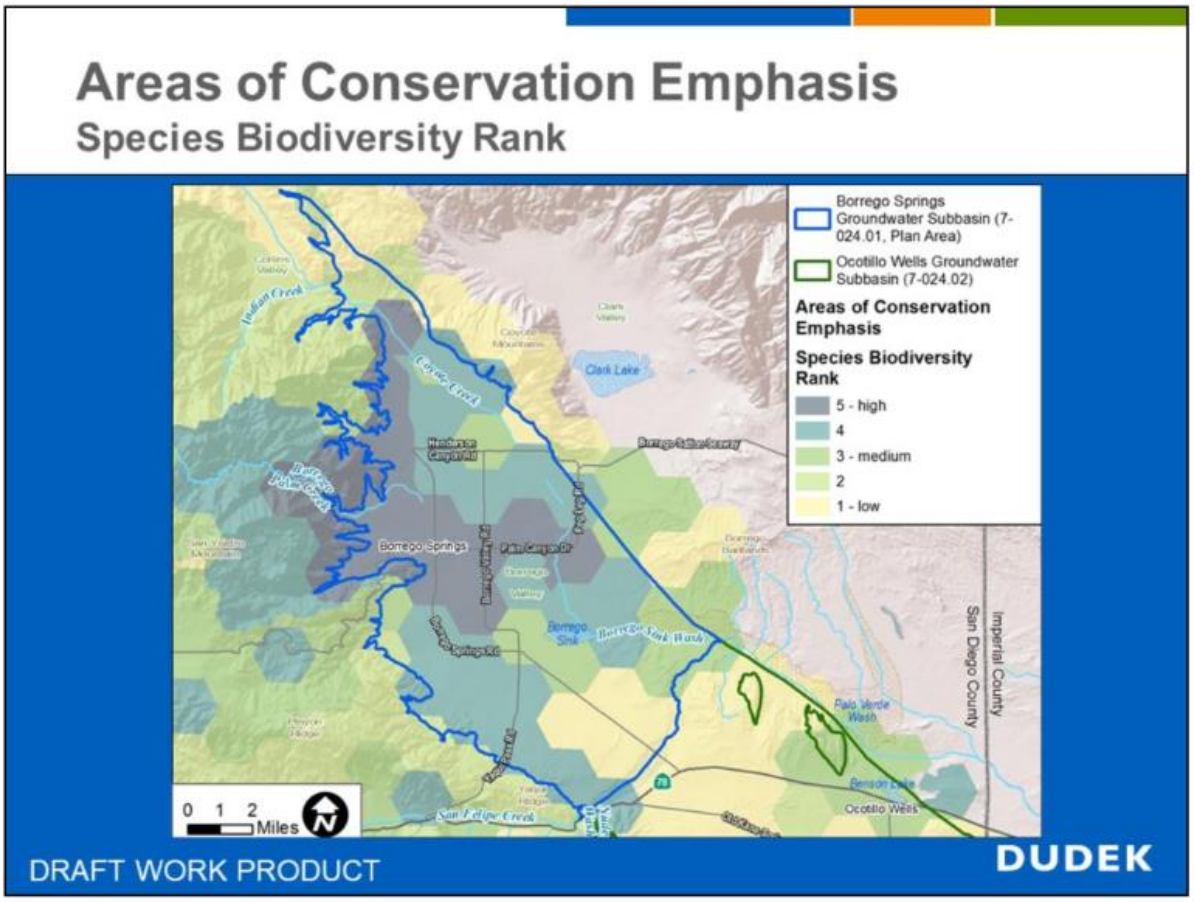


FIGURE 37 ACES MAP, COMBINED SPECIES BIODIVERSITY RANK WITH NATIVE AND RARE RICHNESS AND IRREPLACEABILITY FACTORS. (Dudek GDE)

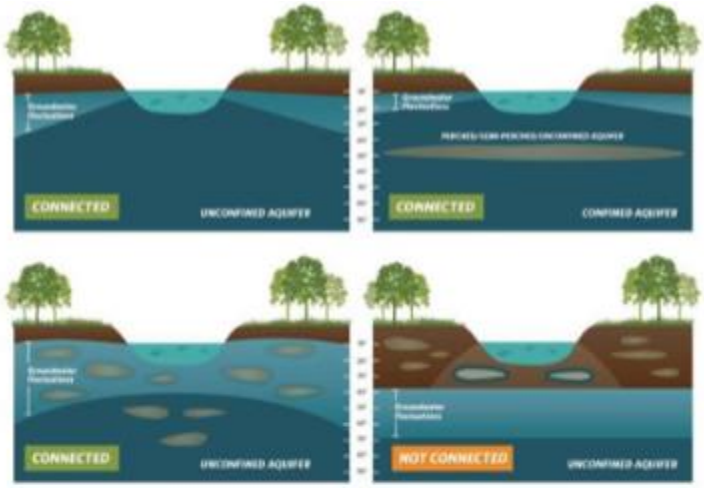


Figure 2. Confirming whether an ecosystem is connected to groundwater in a principal aquifer. Top: (Left) Depth to Groundwater in the aquifer under the ecosystem is an unconfined aquifer with depth to groundwater fluctuating seasonally and interannually within 30 feet from land surface. **(Right)** Depth to Groundwater in the shallow aquifer is connected to overlying ecosystem. Pumping predominately occurs in the confined aquifer, but pumping is possible in the shallow aquifer. **Bottom: (Left)** Depth to groundwater fluctuations are seasonally and interannually large, however, clay layers in the near surface prolong the ecosystem's connection to groundwater. **(Right)** Groundwater is disconnected from surface water, and any water in the vadose (unsaturated) zone is due to direct recharge from precipitation and indirect recharge under surface water feature. These areas typically support species that do not require access to groundwater to survive.

FIGURE 38: TNC LETTER GRAPHIC, FROM GSP DRAFT PUBLIC COMMENTS SECTION

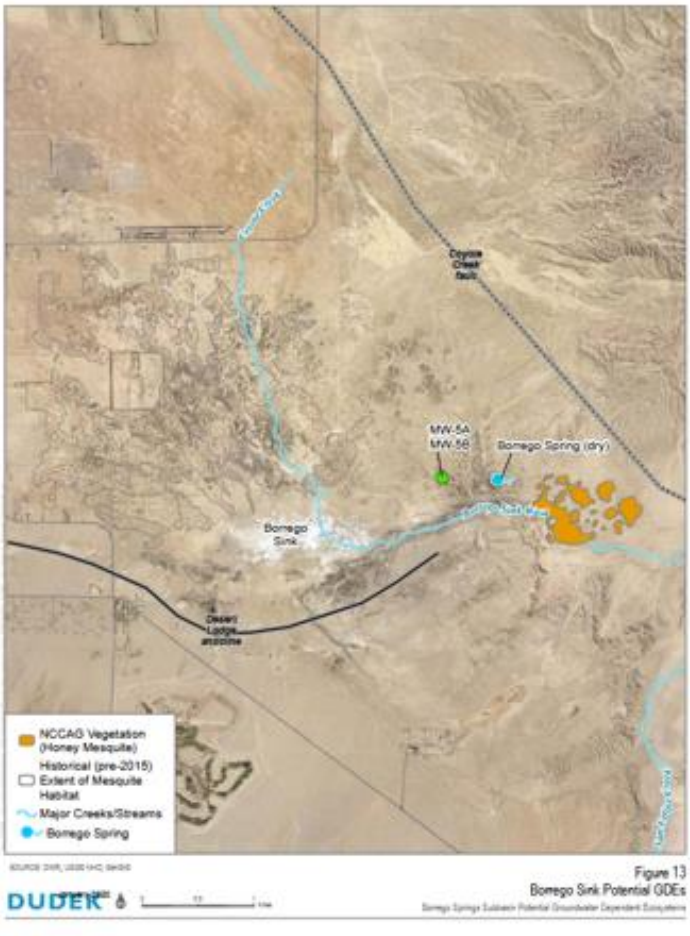


Figure 13
Borrego Sink Potential GDEs

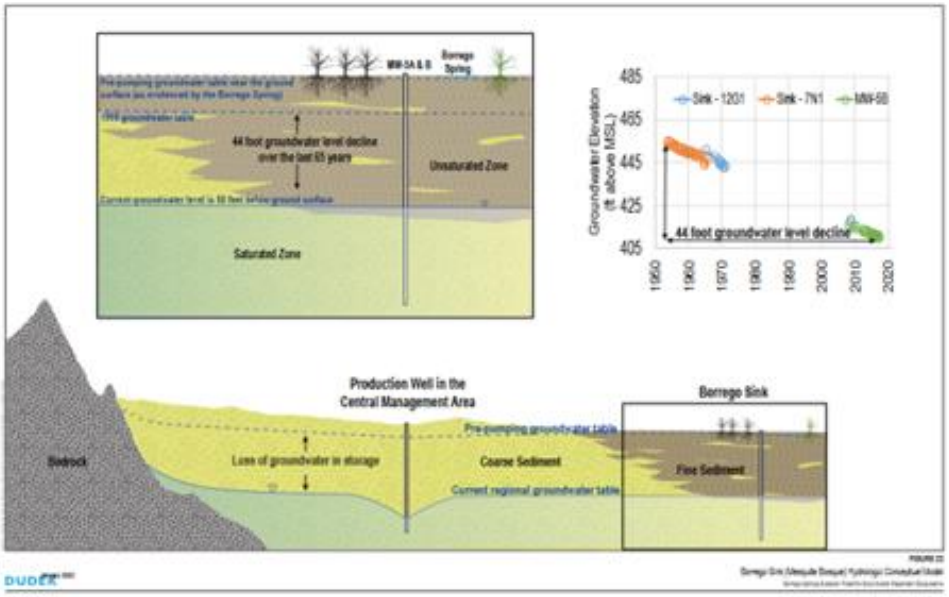
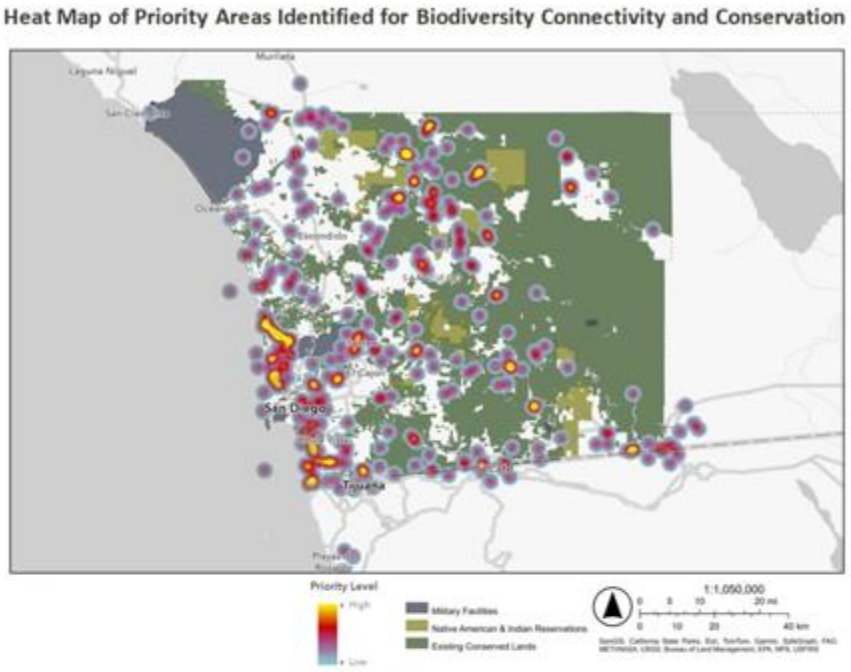


FIGURE 39: SGMA GRANT GROUNDWATER DEPENDENT ECOSYSTEM RESEARCH COMPONENT GRAPHICS



Desert: Structural and Systemic Needs

- Increase education and community engagement
- Poaching enforcement
- Off-Highway Vehicle (OHV) management
- Flooding infrastructure (changes to landscape with flooding and sediment buildup)
- Enhance specific habitat protections during superblooms
- More funding
- Protect aeolian processes

Desert Habitat / Species

- Invasive species: grasses, plants
- Riparian corridors
- Dunes
- Bighorn sheep
- Birds, crows, windmill bird counts
- Low-abundance sensitive species
- Pollinator plants
- Water conservation
- Cactus shrubs

FIGURE 40: SAN DIEGO'S BIODIVERSITY HEAT MAP AND DESERT SPECIFIC NEEDS

Source: San Diego Collaboration for Conservaton, Sustaining the Region's Legacy of Biodiverisity Conservatoin (SD Nat, June 2024)
San Diego Natural History Museum and SANDAG | San Diego Collaboration for Conservation October 2024

FIGURE 41: MOST EFFECTIVE PATHWAYS TO 30X30 AND 30X30 OBJECTIVES, Source: Pathways To 30x30 California; Accelerating Conservation In California, Final Report April 2022

GREEN BUILDING INCENTIVE PROGRAM

The purpose of the Green Building Incentive Program is to encourage homeowners and builders to build using environmentally sound practices. This program is in line with the County's Strategic Plan which has established goals of safeguarding our environment and quality of life and encouraging responsible development.

The County of San Diego Green Building Incentive Program is designed to promote energy efficiency, natural resource conservation, and water conservation in new and remodeled residential and commercial buildings. Eligible participants can benefit from program incentives that, along with the potential for long-term savings, make building green a viable alternative to traditional construction.

For more information, please see the **Green Building Incentive Program informational brochure (PDS #273)**.

CALIFORNIA GREEN BUILDING STANDARDS CODE

The 2019 California Green Building Standards Code (CALGreen Code) was adopted by the California Building Standards Commission will be effective for MANDATORY use on January 1, 2020.

The purpose of this code is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design
- Energy efficiency
- Water efficiency and conservation
- Material conservation and resource efficiency
- Environmental air quality.

In advance of the mandatory effective date, the Department strongly encourages everyone to be aware of this new code and familiarize themselves with the upcoming regulations.

For more information, please see the following:

2019 CALGreen Code

California Department of Housing and Community Development (HCD) CALGreen Information

FIGURE 42: GREEN BUILDING CODE MANDATED FOR USE BY 2020 IN CA (YET COUNTY GUIDELINE # 273 ONLY MENTIONS VOLUNTARY INCENTIVES).

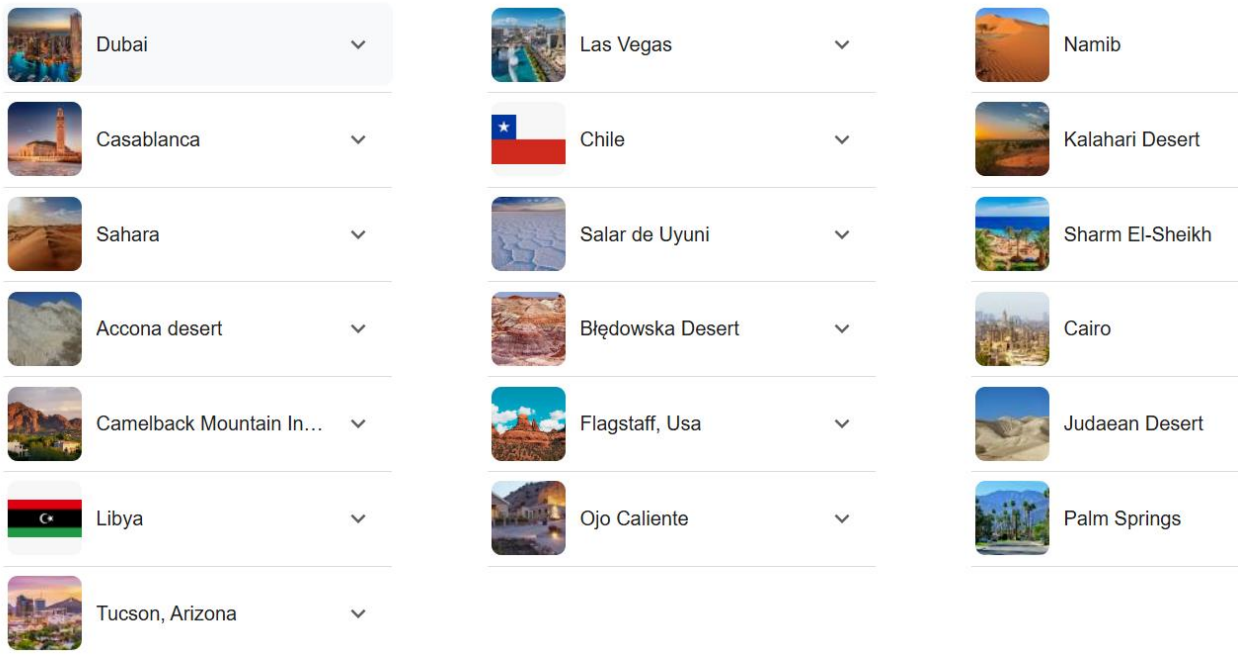


FIGURE 43: INTERNATIONAL (MANY SUSTAINABLE) DESERT COMMUNITIES

 Mid-century modern architecture in Palm Springs, California is characterized by clean lines, open floor plans, and an emphasis on natural light. These homes often have flat roofs, tall windows, and geometric shapes. ¶

Design features ¶

- → **Clean lines**: Simple, basic lines with rectangular windows and doors ¶
- → **Open floor plans**: Create a sense of balance and harmony ¶
- → **Natural light**: Seamless indoor-outdoor living spaces ¶
- → **Organic forms**: Curved contours and flowing lines inspired by nature ¶

Notable examples ¶

- →  ¶

  Kaufmann Desert House ¶

  Designed by Richard Neutra in 1946, this iconic home features large sliding glass doors and open floor plans ¶

- →  ¶

  Twin Palms ¶

  Designed by E. Stewart Williams for Frank Sinatra in 1946, this estate is known for its piano-shaped pool ¶

- →  ¶

  Frey House II ¶

FIGURE 44: MID-CENTURY ARCHITECTURE AND DESIGN IN PALM SPRINGS

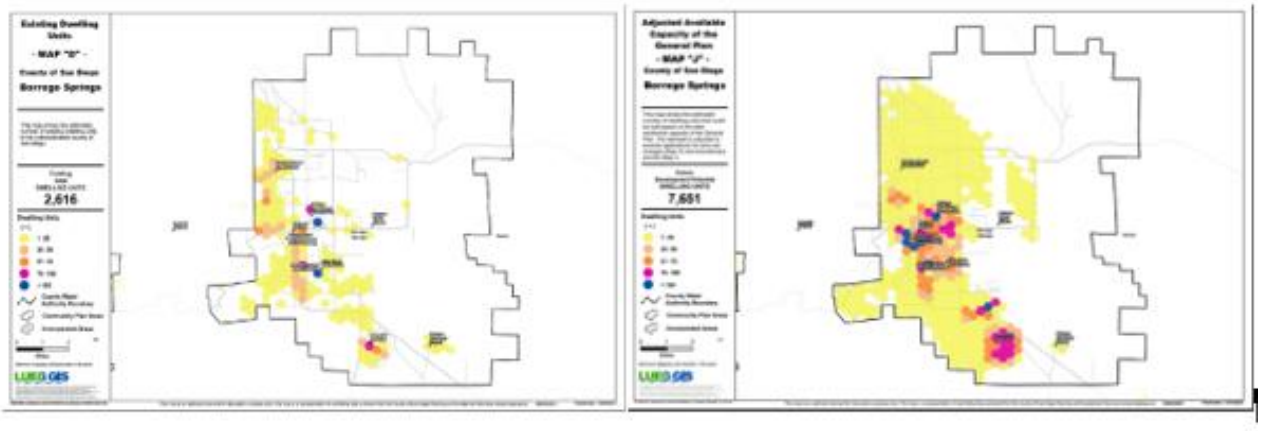


FIGURE 45: ADJUSTED CAPACITY AND FUTURE POTENTIAL DWELLING UNITS Left - Existing Dwelling Units; Right- Adjusted Available Capacity Of The GP Future Potential Dwelling Units

Source:
https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/DevTracker/BorregoSprings.pdf

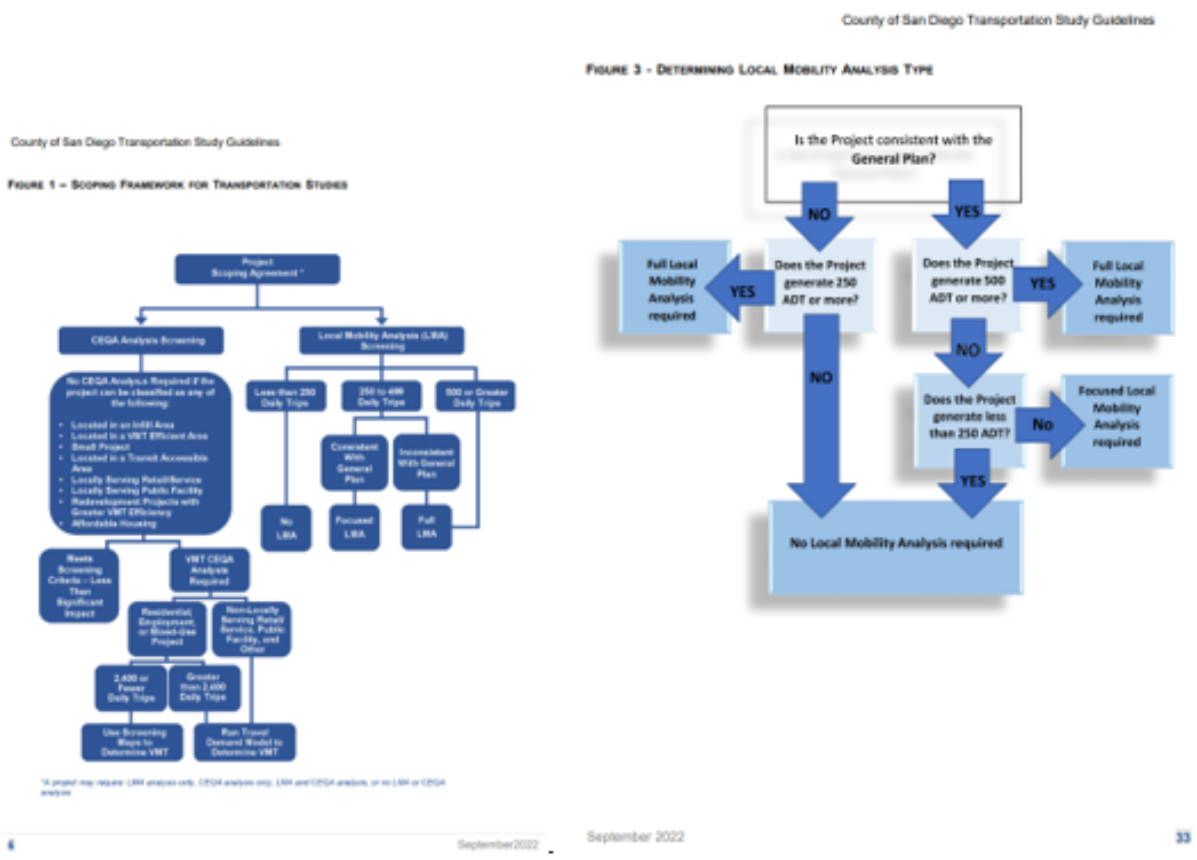


FIGURE 46: TRANSPORTATION STUDY FLOWCHARTS, Source: County Transportation Study Guidelines (TSG) September 2022

"The previous TSG was adopted in June 2020 and included the requirement for analysis of vehicle miles traveled — as mandated by state Senate Bill 743 that was signed into law in 2013. But the 2020 plan only considered vehicle miles traveled within unincorporated areas.¶

The newly adopted TSG is the first phase of the county's effort to meet the requirements of SB 743. In February, the board narrowly approved measures to speed up new housing development, including aligning projects with state and local air quality and emissions goals.¶

County planning staff are expected to research a sustainable land-use policy on how development will proceed in the unincorporated areas, and present their findings to supervisors in December."¶

LED TO THE SLUF¶

"Planning staff are also expected to return to the board within roughly a year with updated California Environmental Quality Act guidelines for projects in higher wildfire hazard zones, along with an updated fire protection plan.¶

Based on a suggestion from Supervisor Joel Anderson, the county will also study other transit opportunities in unincorporated areas and allowing an expansion of wineries in communities such as Jamul and Ramona.¶

Board Chairman Nathan Fletcher said in a statement that the revised TSG "represents a rethinking of our land use patterns to prioritize infill development, connections to transit and addressing climate change — while at the same time building more homes in the unincorporated area."¶

Before the vote, Fletcher told his colleagues that the county's transportation guide needed to line up with SB 743, even if the change is hard. Fletcher said SB 743 became law almost 10 years ago, but county supervisors didn't get involved until 2020. Because state laws are explicitly clear on adopting a regional average in calculating vehicle miles, it would be "recklessly irresponsible" for the board to do something else, he said.¶

Supervisor Jim Desmond, who argued the county should stick with the unincorporated area standard — despite the guidance from the state — was the lone no vote on Wednesday.¶

Desmond described vehicle miles traveled as "a wrench in the ointment" resulting in fewer opportunities to build affordable housing. Desmond said from what he understands, a regional approach is not mandatory.¶

"This is the time we should be building housing," Desmond said.¶

Desmond said it's noble to want more housing near public transit, but not everyone wants to live like a 27-year-old, and some would prefer a single- family home and backyard.¶

Desmond's proposed amendment, also supported by Anderson, to keep original VMT metrics failed on a 3-2 vote.¶

In a statement, Anderson said the original VMT metric kept housing capacity at 18,000 homes, but the new one reduces the number of potential homes to about 5,870. Anderson said he doesn't oppose VMT rules if they're implemented correctly.¶

Supervisor Terra Lawson-Remer, who called the new transportation guide a win-win, said if the county doesn't comply with the state, "we'll have ongoing uncertainty, which is fundamentally worse for everyone."¶

During a public comment period, representatives of environmental groups and others in favor said a uniform VMT policy was needed for better, more ecologically sound development.¶

"Now is the time to take bold action to create cleaner air, and slash climate emissions," said Cristina Marquez, an official with the International Brotherhood of Electrical Workers Local 569.¶

FIGURE 47: COUNTY SLUF IDEA IS BORN (EXCERPTS FROM CITY NEWS SERVICE, POSTED 5:29 PM, SEP 28, 2022)

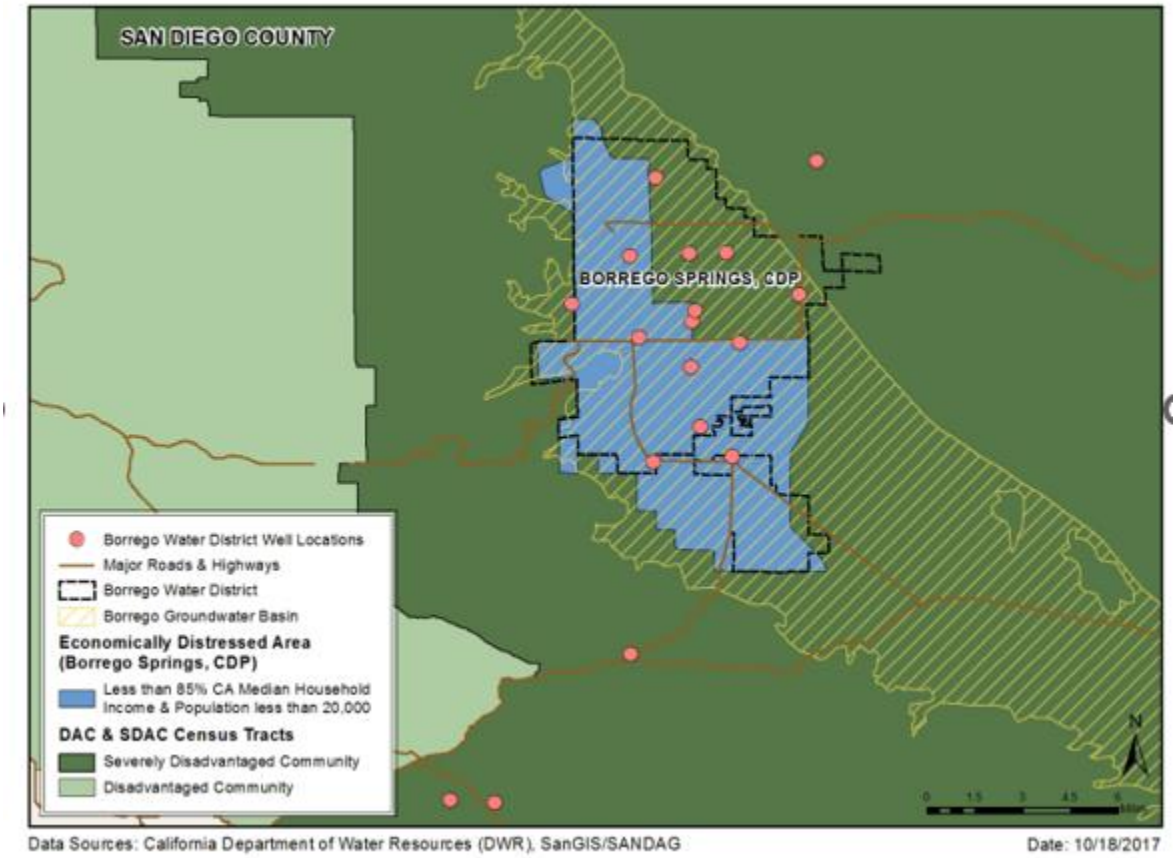


FIGURE 48: BORREGO WATER DISTRICT PROJECT AND SERVICE AREA

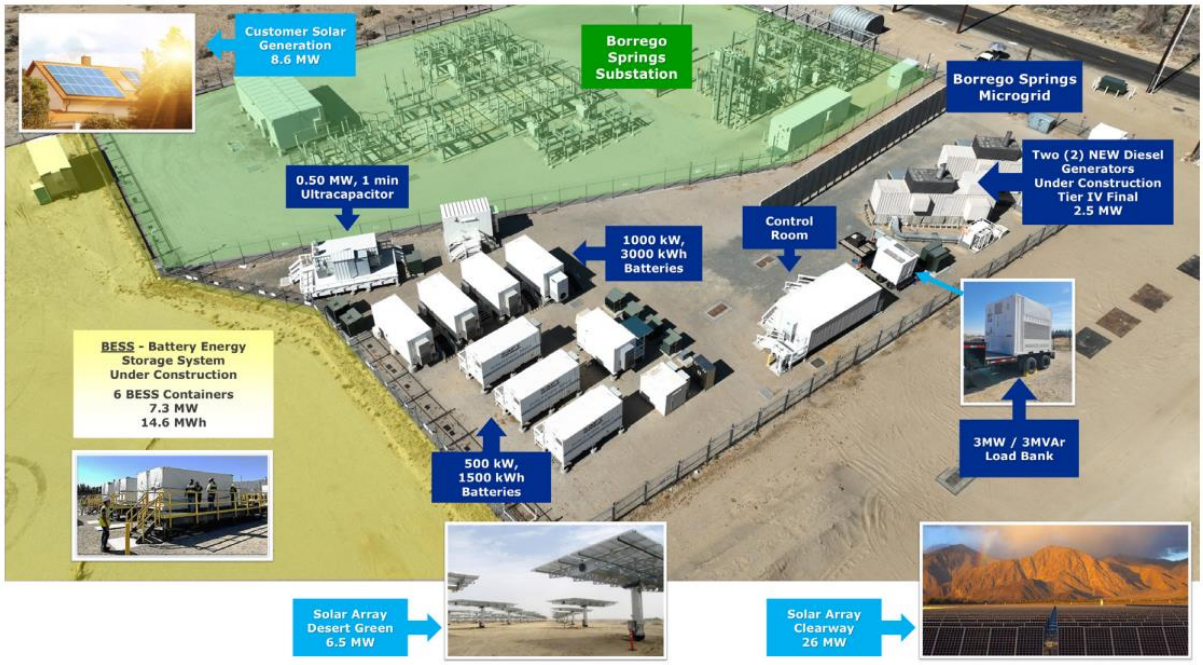


FIGURE 49: BORREGO'S MICROGRID

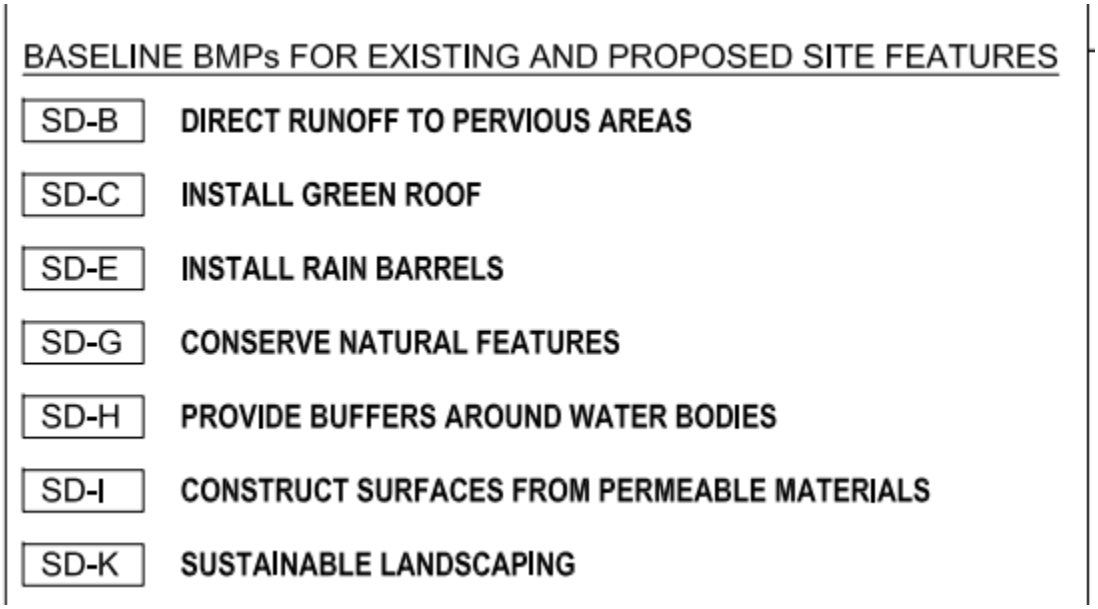


FIGURE 50: COUNTY BASELINE BMPS FOR EXISTING AND PROPOSED SITE FEATURES (EXCERPT FROM #040 COUNTY PLOT PLAN (NOT FOR GRADING))

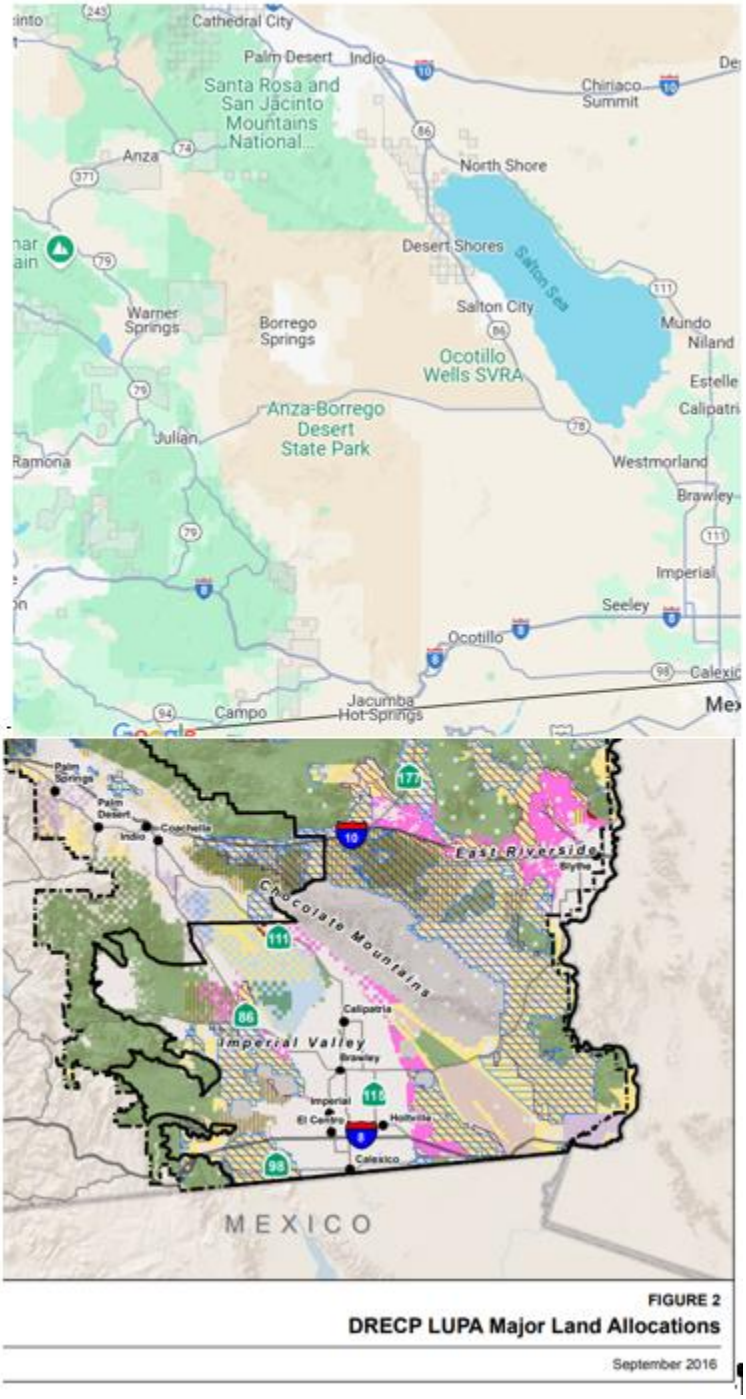


FIGURE 51: COMPARISON MAP OF BORREGO AREA TO DRECP ENERGY “DEVELOPMENT FOCUS AREAS IN PINK

BIODIVERSITY FRIENDLY ENERGY

Hierarchy (in Order of Preference) - Protocol for Placement and Design:

#1 Use local, dispersed designs on existing development

- Use both Roof Top and Parking Lot Solar and Mini-Wind on both commercial and residential buildings and land at scale

#2 Use existing disturbed lands

- Use brown fields (capped land fills), Use non-native pasture/fallow field that are not adjacent to sensitive bioloi

#3 Avoid use of undisturbed habitat

. Avoid Greenfields, Do not use Pristine deserts, Forested mountains, or Native Habitat of any kind

#4 Incorporate innovative nature based solution (NBS) friendly designs

Build lightly with nature. Use vertical stacking; Use movable, flexible, recyclable design. Incorporate NBS - i.e. horizontal access think floating horizontal axis wind turbines with bird roosts on top.

#5 Build redundancy and resilience within communities, allow off-grid/private/local energy for when Big Power goes down

- Think Lahaina,-and LA, avoid power and communication loss. Protect in place by Increasing fire safe independent power from batteries etc. Protect the vulnerable (young and old from heat stroke and those with limited mobility).

#6 Upgrade and replace in Place

- Reconductor to increase efficiency,add additional circuits by reconfiguring existing industrial transmission towers

#7 Streamline regulations

. Add back government incentives (bring back favorable NEM) Work to restore trust in Solar Companies,Microgrid Utility Providers & CCAs - have them make good on their proposal promises.

. Do not alter CEQA and ESA - do not pit green Energy against 50 years of environmental progress

#8 Consider Energy Miles Traveled (develop EMT scores similar to VMTs for carbon & environmental impact)

source: ASK Environmental San Diego

FIGURE 52: BIODIVERSE CLEAN ENERGY GUIDELINES; Source C3 Energy in the Backcountry June 26. 2024

https://studio.youtube.com/video/vlF1OWCKsOk/edit

WHITE PAPER TERMS AND ACRONYMS

30x30 = 2020 a CA state initiative to preserve 30 percent of land and water habitats by 2030 to support biodiversity and climate change resilience that has since been adopted by the federal government and over 190 countries all over the world.

AF or AFY = Acre Feet or Acre Feet per Year are used to measure water volume. It is the amount of water needed to cover one-acre (43,569 square feet) with one-foot of water given as a general number, or per year. One acre-foot is equal to 325,851 gallons of water, enough to cover a football field with a foot of water.

ABDSP = Anza-Borrego Desert State Park

AQUIFER = a body of permeable rock which can contain or transmit groundwater

BASIN = A water basin is a land area that drains water into a specific body of water, such as a river, lake, stream, or estuary. It's also known as a catchment or watershed.

Borrego Springs Groundwater Subbasin = aka "Basin" per the "Watermaster" refers to Groundwater Basin 7-024.01 the Borrego Valley-Borrego Springs Basin. This "Basin" is one of two subbasins within the Borrego Valley Groundwater Basin and is the focus of this FAQ!. This "Basin"; has a surface area of approximately 98 square miles or 62,776 acres.

BPA = Baseline Pumping Allocation is a keystone of the Borrego Springs Watermaster GMP and is defined as the amount of groundwater each pumper in the Subbasin is allocated prior to SGMA-mandated reduction. Based on 2010-2015 pumping data, BPA serves as a cap from which annual pumping reductions will reach sustainable yield by no later than 2040.
https://borregospringswatermaster.com/wp-content/uploads/2024/11/Exhibit_4_BPA_20241001.pdf

BSCSG = Borrego Springs Community Sponsor Group - serves as an advisory group to County officials and acts as the formal conduit between people, businesses and planning matters.

BVGB = Borrego Valley Groundwater Basin -The total surface area of this basin is 150,000 acres (240 square miles) and is comprised of 2 subbasins (Borrego Springs and Ocotillo Wells) and encompasses three aquifers (upper, middle and lower) throughout the valley.

BVSC = Borrego Valley Stewardship Council, directs Component 5 "Resiliency" of the SGMA Grant.

BWD = Borrego Water District, is a State of CA special district established in 1962 to provide water and sewer services(although many locations remain on septic), flood control powers (flood risk management) and pest control (namely gnat abatement) for areas in the Borrego Springs community
https://borregowd.org/

CAP = County Climate Action Plan (final 2024)

CEQA = The California Environmental Quality Act passed in 1970 provides a legal framework to facilitate public review and input on projects which could have a significant effect on the environment.

COD = Critically Overdrafted (Basin), a term used under the SGMA grant program to determine eligibility.

CPA = Community Planning Area

CPUC = California Public Utilities Commission, the state regulator of private investor owned utilities (IOUs) energy companies. Note: public municipal energy companies are self-regulated.

DEI = Diversity, Equity and Inclusion considerations.

DE MINIMIS PUMPER = A non-consequential pumper/extractor (drawer of groundwater) of 2 AF or less per year, for domestic use only.

DWR = California Department of Water Resources

ENERGY = Energy systems can be Municipally Owned or Investor Owned Utilities (IOUs) with energy generation occurring either locally (microgrid or roof top dispersed systems) or distantly (long distance transmission line distributed energy from a remote energy generation source).

FALLOWED LAND = Former agricultural land that has been abandoned or retired, permanently or temporarily from an agricultural purpose

GDE = Groundwater Dependent Ecosystem – such as the Mesquite Bosque. These are monitored to ensure Undesirable Results do not occur to them under the GMP.

GMP = Groundwater Management Plan – Borrego Springs adopted alternative to a (State of CA) GSP to monitor and manage both groundwater levels and groundwater quality in the community. The GMP is a living document and can be updated based on current Best Available Science per annual or 5-year plans.

G or GW = Groundwater. "G" is used when part of a longer acronym as in GMP; "GW" is used as a standalone word for groundwater.

GSA = Groundwater Sustainability (a State of CA) Agency

GSP = Groundwater Sustainability Plan. GSPs have been required since 2014 for identified (COD) overdrafted/at risk water basins and are typically overseen by the State of CA Department of Water Resources (DWR) appointed Groundwater Sustainability Agencies or GSAs (source: https://water.ca.gov/). The required state managed GSP for the BVGB to comply with SGMA was contested and morphed instead into an innovative GMP – developed, managed, and approved by the County of San Diego, the BWD, the "Watermaster", and the State of CA.

What does a GSP do?

It outlines sustainable use and manages groundwater to avoid undesirable results, such as:

- Significant declines in groundwater levels
- Reductions in groundwater storage
- Seawater intrusion
- Degradation of water quality

What would a GSP for the BVGB include?
Or in Borrego's case, what is the GMP for the "Basin" intended to do?

- Describes/characterizes the plan area and groundwater basin
- Creates and implements a "water budget" that balances inflows and outflows
- Evokes sustainability goals to avoid undesirable results

INTEGRATED WATERSHED-SCALE MASTER PLAN = A master community planning effort that integrates the natural watershed services, characteristics, and current and desired functioning. planning based on the local watershed including it's limitations

MSCP = A multiple species conservation program is a habitat based conservation approach to preserve multiple species, as opposed to species by species conservation approach. An MSCP is a combination of a state Natural Communities Conservation Plan (NCCP) and a federal Habitat Conservation Plan under state (CESA) and federal (FESA) Endangered Species Act laws.

NON-DE MINIMIS PUMPER = is a consequential (or large) pumper/extractor (drawer of groundwater) of over 2 AF per year, for domestic and commercial use.

RECHARGE AREA = Areas throughout the Borrego Springs Subbasin where the aquifer will be recharged naturally by rainfall and/or by sustainable management of pumping as outlined in the GMP

REHABILITATION or RESTORATION = land that is passively or actively rehabilitated or restored to a partial or full natural habitat state

SDAC = Socially Disadvantaged Communities - SDACs are Census geographies having less than 60% of the statewide annual median household income (GMP 2020). Note: Borrego Springs is currently recognized as a SDAC under the Sustainable Groundwater Management Act (SGMA). SGMA further defines SDAC's "as areas primarily served by private domestic wells or small community water systems, (meaning communities with limited access to reliable and affordable water supplies, often experiencing disproportionate impacts from groundwater depletion due to their reliance on individual wells); and SGMA specifically instructs Groundwater Sustainability Agencies (GSAs) to consider the interests of these communities when developing groundwater management plans."

SGMA = the Sustainable Groundwater Management Act of 2014. This California law requires local agencies to form groundwater sustainability agencies (GSAs) and develop GSPs to manage groundwater sustainably. SGMA is a Program of the California Department of Water Resources (CDWR) who typically administer the formation of GSAs and GSPs.

SLUF = The County's Sustainable Land Use Framework is a planning process to be carried out during 2025 to engage the County's unincorporated communities to self determine and advocate for desired sustainability initiatives in their communities.

STAKEHOLDERS = Community members; and local, state, and federal officials charged with governing the Borrego Springs Community such as Borrego Water District, Borrego Springs Watermaster Board; community partnering scientists; community and environmental planning professionals; and interested parties and visitors to Borrego Springs.

SUBBASIN = A "water subbasin" is a smaller geographical area within a larger river basin or watershed, defined by natural drainage patterns, where all water flows towards a specific tributary or smaller river, essentially acting as a distinct section within the broader basin for managing and analyzing water resources; it is a smaller part of a larger water basin with its own unique hydrological characteristics.

SUSTAINBLE DEVELOPMENT = economic development that is conducted without depletion of natural resources. See UN 17 Sustainability Goals (2016).

SUSTAINABLE YIELD = Long term sustainable yield (aka SY) is the amount of water in Acre Feet that can be removed sustainably from an aquifer each year. Per the 2020 draft Final GMP, the initial SY was estimated at 5,700 AF but is meant to be reassessed periodically. In 2025 the SY was updated to 7,900 - 7950 AF.

SWOT = Strengths, Weaknesses, Opportunities and Threats analysis carried out on data collected for Borrego Springs, with the results utilized in support of a community resiliency strategy.

PHYSICAL SOLUTION = refers to the court-ordered (adjudicated) plan GMP, ~~essentially a legal judgment coupled with a Groundwater Management Plan (GMP),~~ that dictates how Borrego Springs will manage its water usage to ensure sustainability. The GMP acts as an alternative to a traditional Groundwater Sustainability Plan (GSP) under California's Sustainable Groundwater Management Act (SGMA); it aims to address overdrafting of the Borrego Springs aquifer by setting specific pumping limits and water conservation measures. The GMP sets parameters to allocate specific amounts of allowable groundwater use (pumping allowance) to non-de minimis (i.e. significant and habitual) pumpers consistent with the finalized BPA and mandated water use drawdowns aimed to achieve sustainability by 2040 (see PMA No. 3 -Pumping Reduction Program). https://borregospringswatermaster.com

RDF = County Regional Decarbonization Framework

RESILIENCY STRATEGY = A set of actions, plans, and measures put in place to enhance the resilience of individuals, organizations, communities, or systems in the face of challenges, disruptions, or adverse events. An example would be Borrego Springs developing such a plan to combat climate change challenges.

SOCIO-ECOLOGICAL SYSTEMS =SGMA Grant educational deliverable term, meaning how does the social fabric (community make up, lifestyles, and the economy) of the community affect nature (ecological systems) and visa-versa in Borrego Springs.

TEK = Traditional Ecological Knowledge (also known as Indigenous Local Knowledge—ILK) are often used as a model of sustainable and land use practices.

UC Irvine Anza-Borrego Desert Research Center = Local GMP and SGMA grant scientific partner working on fallow land restoration and rehabilitation techniques as part of SGMA Grant "Component 6 - Biological Restoration of Fallowed Lands."

UNDESIRABLE RESULTS = Sustainability in the "Basin" will be determined by the GMP as avoiding undesirable effects which include: Chronic Lowering of Groundwater Levels, Reduction of Groundwater Storage, Seawater Intrusion, Degraded Water Quality, Land Subsidence, Depletions of Interconnected Surface Water, and effects on Groundwater Dependent Ecosystems (i.e. Mesquite Bosque, Bighorn Sheep)- https://borregospringswatermaster.com

> Borrego Valley GMP "projects and management actions" will be implemented to minimize undesirable results. These projects and management actions make up the basin work plan which includes all 8 components of the 2021 Borrego Springs SGMA grant workplan as follows:

Work Plan Summary

The Work Plan includes activities associated with implementation and continued planning, development, and preparation of groundwater sustainability for the Borrego Valley Subbasin (Basin). The resulting work from this grant will incorporate appropriate Best Management Practices as developed by DWR, and will result in a more complete understanding of the groundwater subbasin to support long-term sustainable groundwater management. The Project contains construction and planning projects including updating the Groundwater Management Plan (GMP). The Work Plan includes eight Components:

Component 1: Grant Administration
Component 2: Advanced Meter Infrastructure
Component 3: Wastewater Treatment Plant Monitoring Wells
Component 4: Education Project
Component 5: Resiliency Strategy
Component 6: Biological Restoration of Fallowed Lands
Component 7: Monitoring, Reporting and Groundwater Management Plan Update
Component 8: Groundwater Dependent Ecosystem Identification, Assessment, & Monitoring

VTM = Vehicle Miles Traveled, replaced Level of Service (LOS) transporation impact criteria under CEQA in 2020 to better take into account the environmental impact of climate change induced by vehicle carbon emissions (instead of waits at traffic signals under LOS).

Watermaster = The Borrego Springs Watermaster Board known as the "Watermaster" is a committee/board of five representatives of the parties to the Judgment subject to two advisory committees: a Technical Advisory Committee (TAC) which must use best available science to avoid Undesirable Result (i.e. draining the aquifer unsustainably, lowering water quality, etc.); and an Environmental Working Group (EWG). The "Watermaster" meets monthly, prepares budgets and monitors GW per the 2020 GMP, provides regular reports (annual and more detailed 5-year reports) and maintains a public data portal: https://borregospringswatermaster.com/

WQMP = Water Quality Monitoring Plan – a required component of the Borrego Springs GMP (a requirement to report on water quality in their annual GMP report).